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 March 31, 2021

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)	
(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," and "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 334,353,962 ordinary shares, €0.04 par value, outstanding at April 28, 2021 (excluding 5,691,666 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 March 31, 2021	2020
Sales and other operating revenues:		
Trade	$ 8,851	$ 7,303
Related parties	231	191
	9,082	7,494
Operating costs and expenses:		
Cost of sales	7,678	6,868
Selling, general and administrative expenses	287	295
Research and development expenses	29	27
	7,994	7,190
Operating income	1,088	304
Interest expense	(110)	(89)
Interest income	2	3
Other income, net	25	—
Income from continuing operations before equity investments and income taxes	1,005	218
Income from equity investments	137	—
Income from continuing operations before income taxes	1,142	218
Provision for income taxes	70	75
Income from continuing operations	1,072	143
(Loss) income from discontinued operations, net of tax	(2)	1
Net income	1,070	144
Dividends on redeemable non-controlling interests	(2)	(2)
Net income attributable to the Company shareholders	$ 1,068	$ 142
Earnings per share:		
Net income (loss) attributable to the Company shareholders —		
Basic:		
Continuing operations	$ 3.20	$ 0.42
Discontinued operations	(0.01)	—
	$ 3.19	$ 0.42
Diluted:		
Continuing operations	$ 3.19	$ 0.42
Discontinued operations	(0.01)	—
	$ 3.18	$ 0.42

See Notes to the Consolidated Financial Statements.

LYONDELLBASELL INDUSTRIES N.V.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Millions of dollars	Three Months Ended March 31, 2021	Three Months Ended March 31, 2020
Net income	$ 1,070	$ 144
Other comprehensive income (loss), net of tax –		
Financial derivatives	175	(338)
Unrealized losses on available-for-sale debt securities	—	(2)
Defined benefit pension and other postretirement benefit plans	11	10
Foreign currency translations	(107)	(199)
Total other comprehensive income (loss), net of tax	79	(529)
Comprehensive income (loss)	1,149	(385)
Dividends on redeemable non-controlling interests	(2)	(2)
Comprehensive income (loss) attributable to the Company shareholders	$ 1,147	$ (387)

See Notes to the Consolidated Financial Statements.

LYONDELLBASELL INDUSTRIES N.V.

CONSOLIDATED BALANCE SHEETS

Millions of dollars	March 31, 2021	December 31, 2020
ASSETS		
Current assets:		
Cash and cash equivalents	$ 1,452	$ 1,763
Restricted cash	11	2
Short-term investments	383	702
Accounts receivable:		
Trade, net	3,796	3,291
Related parties	165	150
Inventories	4,632	4,344
Prepaid expenses and other current assets	1,525	1,382
Total current assets	11,964	11,634
Operating lease assets	1,466	1,492
Property, plant and equipment, at cost	21,631	21,484
Less: Accumulated depreciation	(7,241)	(7,098)
Property, plant and equipment, net	14,390	14,386
Equity investments	4,794	4,729
Goodwill	1,904	1,953
Intangible assets, net	717	751
Other assets	511	458
Total assets	$ 35,746	$ 35,403

See Notes to the Consolidated Financial Statements.

LYONDELLBASELL INDUSTRIES N.V.

CONSOLIDATED BALANCE SHEETS

Millions of dollars, except shares and par value data	March 31, 2021	December 31, 2020
LIABILITIES, REDEEMABLE NON-CONTROLLING INTERESTS AND EQUITY		
Current liabilities:		
Current maturities of long-term debt	$ 958	$ 8
Short-term debt	682	663
Accounts payable:		
Trade	2,703	2,398
Related parties	579	550
Accrued liabilities	1,953	1,883
Total current liabilities	6,875	5,502
Long-term debt	13,785	15,286
Operating lease liabilities	1,199	1,222
Other liabilities	2,554	2,957
Deferred income taxes	2,403	2,332
Commitments and contingencies		
Redeemable non-controlling interests	116	116
Shareholders' equity:		
Ordinary shares, €0.04 par value, 1,275 million shares authorized, 334,313,140 and 334,015,220 shares outstanding, respectively	19	19
Additional paid-in capital	5,993	5,986
Retained earnings	5,158	4,440
Accumulated other comprehensive loss	(1,864)	(1,943)
Treasury stock, at cost, 5,732,488 and 6,030,408 ordinary shares, respectively	(506)	(531)
Total Company share of shareholders' equity	8,800	7,971
Non-controlling interests	14	17
Total equity	8,814	7,988
Total liabilities, redeemable non-controlling interests and equity	$ 35,746	$ 35,403

See Notes to the Consolidated Financial Statements.

LYONDELLBASELL INDUSTRIES N.V.

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Three Months Ended March 31,	
Millions of dollars	**2021**	**2020**
Cash flows from operating activities:		
Net income	$ 1,070	$ 144
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	335	342
Amortization of debt-related costs	5	4
Share-based compensation	19	16
Inventory valuation charges	—	419
Equity investments—		
Equity income	(137)	—
Distributions of earnings, net of tax	20	15
Deferred income tax (benefit) provision	(83)	68
Changes in assets and liabilities that provided (used) cash:		
Accounts receivable	(593)	4
Inventories	(360)	121
Accounts payable	327	(235)
Other, net	(32)	(356)
Net cash provided by operating activities	571	542
Cash flows from investing activities:		
Expenditures for property, plant and equipment	(340)	(660)
Proceeds from maturities of available-for-sale debt securities	74	—
Proceeds from equity securities	226	1
Other, net	(19)	(4)
Net cash used in investing activities	(59)	(663)
Cash flows from financing activities:		
Repurchases of Company ordinary shares	—	(4)
Dividends paid - common stock	(352)	(351)
Purchase of non-controlling interest	—	(30)
Issuance of long-term debt	—	500
Repayments of long-term debt	(500)	—
Issuance of short-term debt	—	500
Net proceeds from commercial paper	—	516
Collateral received from (paid for) interest rate derivatives	66	(238)
Other, net	4	(9)
Net cash (used in) provided by financing activities	(782)	884
Effect of exchange rate changes on cash	(32)	(18)
(Decrease) increase in cash and cash equivalents and restricted cash	(302)	745
Cash and cash equivalents and restricted cash at beginning of period	1,765	888
Cash and cash equivalents and restricted cash at end of period	$ 1,463	$ 1,633

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, December 31, 2020	$ 19	$ (531)	$ 5,986	$ 4,440	$ (1,943)	$ 7,971	$ 17
Net income	—	—	—	1,070	—	1,070	—
Other comprehensive income	—	—	—	—	79	79	—
Share-based compensation	—	25	7	2	—	34	—
Dividends - common stock ($1.05 per share)	—	—	—	(352)	—	(352)	—
Dividends - redeemable non-controlling interests ($15.00 per share)	—	—	—	(2)	—	(2)	—
Sale of non-controlling interest	—	—	—	—	—	—	(3)
Balance, March 31, 2021	$ 19	$ (506)	$ 5,993	$ 5,158	$ (1,864)	$ 8,800	$ 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, 2019	$ 19	$ (580)	$ 5,954	$ 4,435	$ (1,784)	$ 8,044	$ 19
Net income	—	—	—	144	—	144	—
Other comprehensive loss	—	—	—	—	(529)	(529)	—
Share-based compensation	—	25	(11)	1	—	15	—
Dividends - common stock ($1.05 per share)	—	—	—	(351)	—	(351)	—
Dividends - redeemable non-controlling interests ($15.00 per share)	—	—	—	(2)	—	(2)	—
Repurchases of Company ordinary shares	—	(4)	—	—	—	(4)	—
Purchase of non-controlling interest	—	—	7	—	—	7	—
Balance, March 31, 2020	$ 19	$ (559)	$ 5,950	$ 4,227	$ (2,313)	$ 7,324	$ 19

See Notes to the Consolidated Financial Statements.

LYONDELLBASELL INDUSTRIES N.V.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

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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 significant 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. 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. In our opinion, all adjustments, including normal recurring adjustments, considered necessary for a fair statement have been included. The results for interim periods are not necessarily indicative of results for the entire year. 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, 2020.

2. Accounting and Reporting Changes

Recently Adopted Guidance

The following table provides a brief description of recently adopted Accounting Standard Updates (“ASU”) issued by the Financial Accounting Standards Board (“FASB”):

Standard	Description
ASU 2020-01, *Clarifying the Interactions between Topic 321, Topic 323, Equity Method and Joint Ventures, and Topic 815, Derivatives and Hedging*	This guidance clarifies that an entity should consider observable transactions that require it to either apply or discontinue the equity method of accounting for the purposes of applying the measurement alternative in accordance with Topic 321 and includes scope considerations for entities that hold certain non-derivative forward contracts and purchased options to acquire equity securities that, upon settlement of the forward contract or exercise of the purchase option, would be accounted for under the equity method of accounting. This guidance is effective for fiscal years beginning after December 15, 2020, and interim periods within those fiscal years. The prospective adoption of this guidance from January 1, 2021 did not have a material impact on our Consolidated Financial Statements.
ASU 2020-06, *Debt - Debt with Conversion and Other Options and Derivatives and Hedging - Contracts in Entity’s Own Equity*	This guidance simplifies the accounting for convertible instruments and the application of the derivatives scope exception for contracts in an entity’s own equity. The standard also amends the accounting for convertible instruments in the diluted earnings per share calculation and requires enhanced disclosures of convertible instruments and contracts in an entity’s own equity. The guidance is effective for fiscal years beginning after December 15, 2021 and may be applied on a modified or fully retrospective basis. The early adoption of this guidance on a modified retrospective basis from January 1, 2021 did not have a material impact on our Consolidated Financial Statements.

Standard	Description
ASU 2020-09, *Debt (Topic 470): Amendments to SEC Paragraphs Pursuant to SEC Release No. 33-10762*	This guidance amends and supersedes SEC paragraphs in the Accounting Standards Codification to reflect the issuance of SEC Release No. 33-10762 related to financial disclosure requirements for subsidiary issuers and guarantors of registered debt securities and affiliates whose securities are pledged as collateral for registered securities. The guidance is effective for annual and interim periods ending after January 4, 2021. The adoption of this guidance from January 1, 2021 did not have a material impact on our Consolidated Financial Statements.

Accounting Guidance Issued But Not Adopted as of March 31, 2021

There are no ASUs issued and not yet adopted that could have a material impact on our Consolidated Financial Statements.

3. Revenues

Contract Balances—Contract liabilities were $185 million and $194 million at March 31, 2021 and December 31, 2020, respectively. Revenue recognized in each reporting period, included in the contract liability balance at the beginning of the period, was immaterial.

Disaggregation of Revenues—The following table presents our revenues disaggregated by key products:

	Three Months Ended March 31,	
Millions of dollars	2021	2020
Sales and other operating revenues:		
Olefins and co-products	$ 1,091	$ 667
Polyethylene	2,153	1,459
Polypropylene	1,718	1,101
Propylene oxide and derivatives	502	464
Oxyfuels and related products	607	707
Intermediate chemicals	578	544
Compounding and solutions	1,038	912
Advanced polymers	231	181
Refined products	993	1,336
Other	171	123
Total	$ 9,082	$ 7,494

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

	Three Months Ended March 31,	
Millions of dollars	2021	2020
Sales and other operating revenues:		
United States	$ 4,086	$ 3,187
Germany	765	641
China	560	243
Italy	378	335
France	290	270
Poland	270	224
The Netherlands	270	212
Mexico	247	380
Japan	230	335
Other	1,986	1,667
Total	$ 9,082	$ 7,494

4. Accounts Receivable

Our accounts receivable are reflected in the Consolidated Balance Sheets net of allowance for credit losses of $15 million at March 31, 2021 and December 31, 2020.

5. Inventories

Inventories consisted of the following components:

Millions of dollars	March 31, 2021	December 31, 2020
Finished goods	$ 2,733	$ 2,816
Work-in-process	184	144
Raw materials and supplies	1,715	1,384
Total inventories	$ 4,632	$ 4,344

Our inventories are stated at the lower of cost or market (“LCM”). Cost is determined using the last-in, first-out (“LIFO”) inventory valuation methodology, which means that the most recently incurred costs are charged to cost of sales and inventories are valued at the earliest acquisition costs. Market is determined based on an assessment of the current estimated replacement cost and selling price of the inventory. In periods where the market price of our inventory declines substantially, cost values of inventory may be higher than the market value, and as a result we adjust the value of inventory to market value. Fluctuations in the prices of crude oil, natural gas and correlated products from period to period may result in the recognition of charges to adjust the value of inventory to the LCM in periods of falling prices and the reversal of those charges in subsequent interim periods, within the fiscal year, as market prices recover.

During the first three months of 2020, we recognized an LCM inventory valuation charge of $419 million related to the decline in pricing for many of our raw material and finished goods inventories since December 31, 2019.

6. Debt

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

Millions of dollars	March 31, 2021	December 31, 2020
Senior Notes due 2024, $1,000 million, 5.75% ($4 million of debt issuance cost)	$ 996	$ 996
Senior Notes due 2055, $1,000 million, 4.625% ($15 million of discount; $11 million of debt issuance cost)	974	974
Term Loan due 2022, $4,000 million ($1 million of debt issuance cost)	949	1,448
Guaranteed Notes due 2023, $750 million, 4.0% ($3 million of discount; $1 million of debt issuance cost)	746	745
Guaranteed Floating Rate Notes due 2023, $650 million ($3 million of debt issuance cost)	647	646
Guaranteed Notes due 2025, $500 million, 2.875% ($4 million of debt issuance cost)	496	496
Guaranteed Notes due 2025, $500 million, 1.25% ($1 million of discount; $4 million of debt issuance cost)	495	495
Guaranteed Notes due 2026, €500 million, 0.875% ($2 million of discount; $3 million of debt issuance cost)	583	608
Guaranteed Notes due 2027, $1,000 million, 3.5% ($7 million of discount; $5 million of debt issuance cost)	1,086	1,090
Guaranteed Notes due 2027, $300 million, 8.1%	300	300
Guaranteed Notes due 2030, $500 million, 3.375% ($1 million of discount; $4 million of debt issuance cost)	495	495
Guaranteed Notes due 2030, $500 million, 2.25% ($4 million of discount; $4 million of debt issuance cost)	492	492
Guaranteed Notes due 2031, €500 million, 1.625% ($6 million of discount; $4 million of debt issuance cost)	577	602
Guaranteed Notes due 2040, $750 million, 3.375% ($2 million of discount; $8 million of debt issuance cost)	740	740
Guaranteed Notes due 2043, $750 million, 5.25% ($20 million of discount; $7 million of debt issuance cost)	723	723
Guaranteed Notes due 2044, $1,000 million, 4.875% ($10 million of discount; $9 million of debt issuance cost)	981	981
Guaranteed Notes due 2049, $1,000 million, 4.2% ($15 million of discount; $10 million of debt issuance cost)	975	975
Guaranteed Notes due 2050, $1,000 million, 4.2% ($6 million of discount; $10 million of debt issuance cost)	984	984
Guaranteed Notes due 2051, $1,000 million, 3.625% ($3 million of discount; $11 million of debt issuance cost)	986	986
Guaranteed Notes due 2060, $500 million, 3.8% ($4 million of discount; $6 million of debt issuance cost)	490	490
Other	28	28
Total	14,743	15,294
Less current maturities	(958)	(8)
Long-term debt	$ 13,785	$ 15,286

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:

Millions of dollars	Inception Year	Gains (Losses) Three Months Ended March 31, 2021	Gains (Losses) Three Months Ended March 31, 2020	Cumulative Fair Value Hedging Adjustments Included in Carrying Amount of Debt March 31, 2021	Cumulative Fair Value Hedging Adjustments Included in Carrying Amount of Debt December 31, 2020
Senior Notes due 2021, 6.0%	2016	$ —	$ (16)	$ —	$ —
Guaranteed Notes due 2027, 3.5%	2017	4	(80)	(98)	(102)
Guaranteed Notes due 2022, 1.875%	2018	—	1	—	—
Guaranteed Notes due 2026, 0.875%	2020	1	—	(1)	(2)
Total		$ 5	$ (95)	$ (99)	$ (104)

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	March 31, 2021	December 31, 2020
U.S. Receivables Facility	$ —	$ —
Commercial paper	500	500
Precious metal financings	162	140
Other	20	23
Total Short-term debt	$ 682	$ 663

Long-Term Debt

Senior Revolving Credit Facility—Our $2,500 million Senior Revolving Credit Facility, of which $2,440 million expires in June 2023 and the remainder expires in June 2022, may be used for dollar and euro denominated borrowings. The facility has a $500 million sub-limit for dollar and euro denominated letters of credit, a $1,000 million uncommitted accordion feature, and supports our commercial paper program. Borrowings under the facility bear interest at either a base rate or LIBOR rate, plus an applicable margin. Additional fees are incurred for the average daily unused commitments. At March 31, 2021, we had no borrowings or letters of credit outstanding and $2,005 million of unused availability under this facility.

Term Loan due 2022—In March 2019, LYB Americas Finance Company LLC (“LYB Americas Finance”), a wholly owned subsidiary of LyondellBasell Industries N.V., entered into a $4,000 million senior unsecured delayed draw term loan credit facility that matures in March 2022. Borrowings under the credit agreement were available through December 31, 2019, subsequent to which no further borrowings may be made under the agreement. Outstanding borrowings bear interest at either a base rate or LIBOR rate, as defined, plus in each case, an applicable margin determined by reference to LyondellBasell N.V.’s current credit ratings.

In January 2021, we repaid $500 million outstanding under our Term Loan due 2022. An additional $500 million was repaid in April 2021.

Short-Term Debt

U.S. Receivables Facility—Our U.S. Receivables Facility, which expires in July 2021, 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. This facility also provides for the issuance of letters of credit up to $200 million. We plan on extending all or a portion of this facility prior to its maturity in July 2021 in accordance with the terms of the agreement. At March 31, 2021, 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"). Interest rates on the commercial paper outstanding at March 31, 2021 are based on the terms of the notes and range from 0.19% to 0.27%. At March 31, 2021, we had $500 million of outstanding commercial paper.

Weighted Average Interest Rate—At March 31, 2021 and December 31, 2020, our weighted average interest rates on outstanding Short-term debt was 0.9%.

Additional Information

Debt Discount and Issuance Costs—Amortization of debt discounts and debt issuance costs resulted in amortization expense of $5 million and $4 million for the three months ended March 31, 2021 and 2020, respectively, which is included in Interest expense in the Consolidated Statements of Income.

As of March 31, 2021, we are in compliance with our debt covenants.

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.

A summary of our financial instruments, risk management policies, derivative instruments, hedging activities and fair value measurement can be found in Notes 2 and 13 to our Consolidated Financial Statements included in our Annual Report on Form 10-K for the year ended December 31, 2020. If applicable, updates have been included in the respective sections below.

Cash and Cash Equivalents—At March 31, 2021 and December 31, 2020, we had marketable securities classified as Cash and cash equivalents of $560 million and $682 million, respectively.

Foreign Currency Gain (Loss)—Other income, net, in the Consolidated Statements of Income reflected foreign currency gains of $3 million and losses of $7 million for the three months ended March 31, 2021 and 2020, respectively.

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:

	March 31, 2021		December 31, 2020		
Millions of dollars	Notional Amount	Fair Value	Notional Amount	Fair Value	Balance Sheet Classification
Assets–					
Derivatives designated as hedges:					
Commodities	$ 25	$ 5	$ 19	$ 3	Prepaid expenses and other current assets
Commodities	30	4	41	4	Other Assets
Foreign currency	358	56	—	26	Prepaid expenses and other current assets
Interest rates	—	1	—	—	Prepaid expenses and other current assets
Interest rates	117	1	122	2	Other assets
Derivatives not designated as hedges:					
Commodities	111	5	71	2	Prepaid expenses and other current assets
Foreign currency	34	1	149	—	Prepaid expenses and other current assets
Non-derivatives:					
Available-for-sale debt securities	265	266	348	349	Short-term investments
Equity securities	117	117	353	353	Short-term investments
Total	$ 1,057	$ 456	$ 1,103	$ 739	
Liabilities–					
Derivatives designated as hedges:					
Commodities	$ —	$ —	$ —	$ 2	Accrued liabilities
Foreign currency	855	116	1,213	146	Accrued liabilities
Foreign currency	2,682	209	2,682	302	Other liabilities
Interest rates	1,150	120	1,000	343	Other liabilities
Derivatives not designated as hedges:					
Commodities	191	22	113	14	Accrued liabilities
Foreign currency	717	5	76	1	Accrued liabilities
Total	$ 5,595	$ 472	$ 5,084	$ 808	

As of March 31, 2021, our limited partnership investments included in our equity securities discussed below are measured at fair value using the net asset value per share (or its equivalent) practical expedient and have not been classified in the fair value hierarchy. All other financial instruments in the table above, including equity securities as of December 31, 2020, are classified as Level 2. We present the gross assets and liabilities of our derivative financial instruments on the Consolidated Balance Sheets.

At March 31, 2021, our outstanding foreign currency contracts, not designated as hedges, mature from April 2021 to March 2022. Our commodity contracts, not designated as hedges, mature in May 2021.

Financial Instruments Not Measured at Fair Value on a Recurring Basis—The following table presents the carrying value and estimated fair value of our financial instruments that are not measured at fair value on a recurring basis for the periods presented. Due to the short maturity, the fair value of all non-derivative financial instruments included in Current assets and Current liabilities for which the carrying value approximates fair value are excluded from the table below. Short-term and long-term debt are recorded at amortized cost in the Consolidated Balance Sheets. The carrying and fair values of short-term and of long-term debt exclude commercial paper and other miscellaneous debt. All financial instruments in the table below are classified as Level 2.

	March 31, 2021		December 31, 2020	
Millions of dollars	Carrying Value	Fair Value	Carrying Value	Fair Value
Non-derivatives:				
Liabilities:				
Short-term debt	$ 162	$ 181	$ 140	$ 154
Long-term debt	14,715	15,895	15,266	17,290
Total	$ 14,877	$ 16,076	$ 15,406	$ 17,444

Net Investment Hedges—The following table summarizes our net investment hedges outstanding for the periods presented:

	March 31, 2021		December 31, 2020		
Millions of euro/dollars	Notional Value		Notional Value		Expiration Date
		Equivalent US$		Equivalent US$	
Foreign currency	€ 1,667	$ 1,890	€ 1,667	$ 1,890	2021 to 2030

In April 2021, we entered into a foreign currency contract with a notional value of €250 million that was designated as a net investment hedge.

Cash Flow Hedges—The following table summarizes our cash flow hedges outstanding for the periods presented:

	March 31, 2021	December 31, 2020	
Millions of dollars	Notional Value	Notional Value	Expiration Date
Foreign currency	$ 2,005	$ 2,005	2021 to 2027
Interest rates	1,000	1,000	2023 to 2024
Commodities	55	60	2021 to 2022

As of March 31, 2021 and December 31, 2020, Other assets include $172 million and $238 million of collateral held with our counterparties related to our forward-starting interest rate swaps, respectively. Related cash flows are included in financing activities in the Consolidated Statements of Cash Flows.

As of March 31, 2021, 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.

Fair Value Hedges—The following table summarizes our fair value hedges outstanding for the periods presented:

	March 31, 2021	December 31, 2020	
Millions of dollars	**Notional Value**	**Notional Value**	**Expiration Date**
Interest rates	$ 267	$ 122	2026 to 2030

In March 2021, we entered into a fixed-for-floating interest rate swap to mitigate the change in the fair value of $150 million of our $500 million, 3.375% guaranteed notes due 2030 associated with the risk of variability in the 3-month LIBOR rate component.

In April 2021, we entered into two fixed-for-floating interest rate swaps to mitigate the change in the fair value associated with the risk of variability in the 3-month LIBOR rate component of $150 million of our $500 million, 2.875% guaranteed notes due 2025 and $150 million of our $1,000 million, 3.5% guaranteed notes due 2027.

The fixed-rate and variable-rate components for these trades are settled semi-annually and quarterly, respectively.

Impact on Earnings and Other Comprehensive Income—The following tables summarize the pre-tax effect of derivative and non-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 March 31,						
	Gain (Loss) Recognized in AOCI		Gain (Loss) Reclassified from AOCI to Income		Gain (Loss) Recognized in Income		
Millions of dollars	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**Income Statement Classification**
Derivatives designated as hedges:							
Commodities	$ 6	$ —	$ (1)	$ —	$ —	$ —	Cost of sales
Foreign currency	148	164	(92)	(53)	12	16	Interest expense
Interest rates	223	(535)	1	—	2	96	Interest expense
Derivatives not designated as hedges:							
Commodities	—	—	—	—	3	(9)	Sales and other operating revenues
Commodities	—	—	—	—	11	(3)	Cost of sales
Foreign currency	—	—	—	—	(14)	(4)	Other income, net
Non-derivatives designated as hedges:							
Long-term debt	—	22	—	—	—	—	Other income, net
Total	$ 377	$ (349)	$ (92)	$ (53)	$ 14	$ 96	

The derivative amounts excluded from the assessment of effectiveness for foreign currency contracts designated as net investment hedges recognized in Other comprehensive income for the three months ended March 31, 2021 and 2020 were gains of $4 million and less than $1 million, respectively.

The derivative amounts excluded from the assessment of effectiveness for foreign currency contracts designated as net investment hedges recognized in Interest expense for the three months ended March 31, 2021 and 2020 were gains of $3 million and $4 million, respectively.

The pre-tax effect of the periodic receipt of fixed interest and payment of variable interest associated with our fixed-for-floating interest rate swaps resulted in less than $1 million and $2 million decreases in Interest expense during the three months ended in March 31, 2021 and 2020, respectively.

Investments in Available-for-Sale Debt Securities—The following table summarizes the amortized cost, gross unrealized gains and losses, and fair value of our outstanding available-for-sale debt securities:

Millions of dollars	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Debt securities at March 31, 2021	$ 265	$ 1	$ —	$ 266
Debt securities at December 31, 2020	348	1	—	349

No allowance for credit losses related to our available-for-sale debt securities were recorded for the three months ended March 31, 2021 and for the year ended December 31, 2020.

As of March 31, 2021, bonds classified as available-for-sale debt securities had remaining maturities between 1 month and 3 months.

We received proceeds of $74 million from maturities of our available-for-sale debt securities during the three months ended March 31, 2021. No proceeds were received from maturities of our available-for-sale debt securities during the three months ended March 31, 2020. In addition, no proceeds were received and no gain or loss was realized in connection with the sales of our available-for-sale debt securities during the three months ended March 31, 2021 and 2020, respectively.

We had no available-for-sale debt securities which were in a continuous unrealized loss position for less than or greater than twelve months as of March 31, 2021 and December 31, 2020.

Investments in Equity Securities—Our investment in equity securities consists of an investment in a limited partnership with a notional amount of $117 million and $353 million as of March 31, 2021 and December 31, 2020, respectively. Carrying amount approximate fair value. The investment is carried at its net asset value as a practical expedient at March 31, 2021 and fair value at December 31, 2020. The investment is under voluntary liquidation by the fund administrator and we expect the investment to be fully liquidated within the next twelve months, during which time redemption or sale of the investment is restricted.

We received proceeds of $226 million and $1 million related to our investments in equity securities during the three months ended March 31, 2021 and 2020, respectively. Proceeds of $16 million were received in April 2021.

We recognized unrealized gains of less than $1 million on our equity securities that were outstanding during the three months ended March 31, 2021 and 2020.

8. Income Taxes

For interim tax reporting, we estimate an annual effective tax rate which is applied to the year-to-date ordinary income (loss). 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 pretax income in countries with varying statutory tax rates, changes in valuation allowances, changes in foreign exchange gains (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 European 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 and tax rulings, which could change.

Our effective income tax rate for the three months ended March 31, 2021 was 6.1% compared with 34.4% for the three months ended March 31, 2020. The lower effective tax rate was primarily attributable to the remeasurement of U.S. deferred tax liabilities that occurred in the prior year as a result of the Coronavirus Aid, Relief, and Economic Security Act, also known as the “CARES Act”, and return to accrual adjustments primarily from a tax benefit associated with a step-up of certain Italian assets to fair market value. The tax benefit associated with a step-up of certain Italian assets resulted from a tax change which allows a voluntary step-up of tangible and intangible assets to fair market value in exchange for a substitute tax. During the first quarter of 2021, we assessed a reasonable estimate of the step-up of select assets and recognized a net tax benefit of $120 million. These drivers were partially offset by the reduced relative impact of our tax rate drivers, primarily exempt income, due to increased pre-tax 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. As of March 31, 2021, we had capital expenditure commitments, which we incurred in our normal course of business, including commitments of approximately $316 million related to building our new PO/TBA plant in Houston, Texas.

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 difficulty 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 $130 million and $133 million as of March 31, 2021 and December 31, 2020, respectively. At March 31, 2021, the accrued liabilities for individual sites range from less than $1 million to $16 million. The remediation expenditures are expected to occur over a number of years, and 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 March 31, 2021, 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 a 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—In March 2021, we paid a cash dividend of $1.05 per share for an aggregate of $352 million to shareholders of record on March 8, 2021.

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

	Three Months Ended March 31,	
	2021	2020
Ordinary shares outstanding:		
Beginning balance	334,015,220	333,476,883
Share-based compensation	247,964	196,037
Employee stock purchase plan	49,956	81,215
Purchase of ordinary shares	—	(50,685)
Ending balance	334,313,140	333,703,450

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

	Three Months Ended March 31,	
	2021	2020
Ordinary shares held as treasury shares:		
Beginning balance	6,030,408	6,568,745
Share-based compensation	(247,964)	(196,037)
Employee stock purchase plan	(49,956)	(81,215)
Purchase of ordinary shares	—	50,685
Ending balance	5,732,488	6,342,178

Accumulated Other Comprehensive Loss—The components of, and after-tax changes in, Accumulated other comprehensive loss as of and for the three months ended March 31, 2021 and 2020 are presented in the following tables:

Millions of dollars	Financial Derivatives	Unrealized Gains on Available -for-Sale Debt Securities	Defined Benefit Pension and Other Postretirement Benefit Plans	Foreign Currency Translation Adjustments	Total
Balance – January 1, 2021	$ (426)	$ 1	$ (752)	$ (766)	$ (1,943)
Other comprehensive income (loss) before reclassifications	315	—	—	(93)	222
Tax expense before reclassifications	(68)	—	—	(14)	(82)
Amounts reclassified from accumulated other comprehensive loss	(92)	—	15	—	(77)
Tax (expense) benefit	20	—	(4)	—	16
Net other comprehensive income (loss)	175	—	11	(107)	79
Balance – March 31, 2021	$ (251)	$ 1	$ (741)	$ (873)	$ (1,864)

Millions of dollars	Financial Derivatives	Unrealized Gains on Available -for-Sale Debt Securities	Defined Benefit Pension and Other Postretirement Benefit Plans	Foreign Currency Translation Adjustments	Total
Balance – January 1, 2020	$ (200)	$ —	$ (711)	$ (873)	$ (1,784)
Other comprehensive loss before reclassifications	(388)	(3)	—	(195)	(586)
Tax (expense) benefit before reclassifications	88	1	—	(4)	85
Amounts reclassified from accumulated other comprehensive loss	(53)	—	14	—	(39)
Tax (expense) benefit	15	—	(4)	—	11
Net other comprehensive income (loss)	(338)	(2)	10	(199)	(529)
Balance – March 31, 2020	$ (538)	$ (2)	$ (701)	$ (1,072)	$ (2,313)

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

Millions of dollars	Three Months Ended March 31, 2021	2020	Affected Line Item on the Consolidated Statements of Income
Reclassification adjustments for:			
Financial derivatives:			
Foreign currency	$ (92)	$ (53)	Interest expense
Commodities	(1)	—	Cost of sales
Interest rates	1	—	Interest expense
Income tax expense (benefit)	(20)	(15)	Provision for income taxes
Financial derivatives, net of tax	(72)	(38)	
Amortization of defined pension items:			
Prior service cost	1	1	Other income, net
Actuarial loss	14	13	Other income, net
Income tax expense (benefit)	4	4	Provision for income taxes
Defined pension items, net of tax	11	10	
Total reclassifications, before tax	(77)	(39)	
Income tax benefit	(16)	(11)	Provision for income taxes
Total reclassifications, after tax	$ (61)	$ (28)	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 our consolidated subsidiary, formerly known as A. Schulman. As of March 31, 2021 and December 31, 2020, we had 115,374 shares of redeemable non-controlling interest stock outstanding.

In February 2021, we paid cash dividends of $15.00 per share to our redeemable non-controlling interest shareholders of record as of January 15, 2021. These dividends totaled $2 million for each of the three months ended March 31, 2021 and 2020.

11. Per Share Data

Basic earnings per share are based upon the weighted average number of shares of common stock outstanding during the periods. Diluted earnings per share includes the effect of certain stock option awards and other equity-based compensation awards. We have unvested restricted stock units that are considered participating securities for earnings per share.

Earnings per share data and dividends declared per share of common stock are as follows:

	Three Months Ended March 31,			
	2021		2020	
Millions of dollars	Continuing Operations	Discontinued Operations	Continuing Operations	Discontinued Operations
Net income (loss)	$ 1,072	$ (2)	$ 143	$ 1
Dividends on redeemable non-controlling interests	(2)	—	(2)	—
Net (income) loss attributable to participating securities	(2)	—	—	—
Net income (loss) attributable to ordinary shareholders – basic and diluted	$ 1,068	$ (2)	$ 141	$ 1
Millions of shares, except per share amounts				
Basic weighted average common stock outstanding	334	334	334	334
Effect of dilutive securities	—	—	—	—
Potential dilutive shares	334	334	334	334
Earnings (loss) per share:				
Basic	$ 3.20	$ (0.01)	$ 0.42	$ —
Diluted	$ 3.19	$ (0.01)	$ 0.42	$ —

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, and advanced polymers, which includes *Catalloy* and polybutene-1.
- *Refining*. Our Refining segment refines heavy, high-sulfur crude oil 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 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 primarily 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 March 31, 2021							
Millions of dollars	**O&P–Americas**	**O&P–EAI**	**I&D**	**APS**	**Refining**	**Technology**	**Other**	**Total**
Sales and other operating revenues:								
Customers	$ 2,135	$ 2,840	$ 1,704	$ 1,269	$ 993	$ 141	$ —	$ 9,082
Intersegment	724	207	63	1	133	24	(1,152)	—
	2,859	3,047	1,767	1,270	1,126	165	(1,152)	9,082
Income from equity investments	30	95	12	—	—	—	—	137
EBITDA	867	412	182	135	(110)	94	5	1,585
Capital expenditures	65	40	145	20	25	22	23	340

	Three Months Ended March 31, 2020							
Millions of dollars	**O&P–Americas**	**O&P–EAI**	**I&D**	**APS**	**Refining**	**Technology**	**Other**	**Total**
Sales and other operating revenues:								
Customers	$ 1,173	$ 2,064	$ 1,732	$ 1,093	$ 1,336	$ 96	$ —	$ 7,494
Intersegment	619	160	38	3	112	26	(958)	—
	1,792	2,224	1,770	1,096	1,448	122	(958)	7,494
Income (loss) from equity investments	2	(3)	2	(1)	—	—	—	—
LCM inventory valuation charge	111	36	78	2	192	—	—	419
EBITDA	366	189	203	113	(272)	56	(9)	646
Capital expenditures	204	42	353	13	16	30	2	660

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 March 31,	
Millions of dollars	**2021**	**2020**
EBITDA:		
Total segment EBITDA	$ 1,580	$ 655
Other EBITDA	5	(9)
Less:		
Depreciation and amortization expense	(335)	(342)
Interest expense	(110)	(89)
Add:		
Interest income	2	3
Income from continuing operations before income taxes	$ 1,142	$ 218

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.").

OVERVIEW

First quarter performance built upon the economic momentum we saw toward the end of last year. We experienced improved consumer-driven demand, recovery in durable goods markets and industry supply constraints, which enabled price increases and drove margin improvements for many of our products. During February 2021, unusually cold weather and related power outages impacted operations in our industry across the state of Texas and reduced our production volumes. In March 2021 we achieved the first full quarter of results for our recently formed Louisiana Integrated PolyEthylene JV LLC joint venture (the "Louisiana Joint Venture") in which we have a 50% ownership interest. We benefited from the increased geographic diversity of our portfolio as the Louisiana ethylene cracker operated continuously when most Texas assets were down due to the cold weather. Tight markets and strong demand drove margin improvements in our O&P—Americas and O&P—EAI segments. Higher demand from automotive and other non-durable markets increased volumes for our Advanced Polymer Solutions segment while margins compressed due to rapidly rising raw material costs.

Significant items that affected our results during the first quarter of 2021 relative to the first quarter of 2020 include:

- O&P—Americas results increased primarily due to olefin margin improvements and the first full quarter of results for our newly formed Louisiana Joint Venture;

- O&P—EAI results improved as a result of higher polyolefin margins and equity income, partly offset by lower olefin margins; and

- I&D results declined primarily driven by lower volumes across most businesses from the downtime in Texas due to the weather events.

Other noteworthy items since the beginning of the year include the following:

- In January 2021, signed an agreement to form a 50 percent owned joint venture with the China Petroleum & Chemical Corporation which will construct a new PO and SM unit in China; and

- In both January and April 2021, repaid $500 million outstanding under our Term Loan due 2022, for a total repayment of $1 billion.

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

	Three Months Ended March 31,	
Millions of dollars	**2021**	**2020**
Sales and other operating revenues	$ 9,082	$ 7,494
Cost of sales	7,678	6,868
Selling, general and administrative expenses	287	295
Research and development expenses	29	27
Operating income	1,088	304
Interest expense	(110)	(89)
Interest income	2	3
Other income, net	25	—
Income from equity investments	137	—
Income from continuing operations before income taxes	1,142	218
Provision for income taxes	70	75
Income from continuing operations	1,072	143
(Loss) income from discontinued operations, net of tax	(2)	1
Net income	$ 1,070	$ 144

RESULTS OF OPERATIONS

Revenues—Revenues increased by $1,588 million, or 21%, in the first quarter of 2021 compared to the first quarter of 2020. Average sales prices in the first quarter of 2021 were higher for many of our products as sales prices generally correlate with crude oil prices, which increased relative to the corresponding period in 2020. These higher prices led to a 26% increase in revenue in the first quarter of 2021. Favorable foreign exchange impacts resulted in a revenue increase of 4% during the first quarter of 2021. Lower sales volumes resulted in a revenue decrease of 9% relative to the first quarter of 2020 primarily due to unusually cold temperatures and associated electrical power outages that led to shutdowns in our Refining and I&D manufacturing facilities in Texas partially offset by revenues generated from our Louisiana Joint Venture.

Cost of Sales—Cost of sales increased by $810 million, or 12%, in the first quarter of 2021 compared to the first quarter of 2020. This increase primarily related to higher feedstock and energy costs. Additionally, in the first quarter of 2020, we recognized an LCM inventory valuation charge of $419 million related to the decline in market pricing for many of our raw material and finished goods inventories during the quarter.

Operating Income—Operating income increased by $784 million, or 258%, in the first quarter of 2021 compared to the first quarter of 2020. In the first quarter of 2021, operating income in our O&P–Americas, Refining, O&P–EAI, Technology and APS segments increased by $449 million, $184 million, $124 million, $35 million and $34 million, respectively, relative to the first quarter of 2020. The increases were partially offset by a decline of $43 million in our I&D segment in the first quarter of 2021 compared to the first quarter of 2020. Results for each of our business segments are discussed further in the “Segment Analysis” section below.

Income from Equity Investments—Income from our equity investments increased $137 million, or 100%, in the first quarter of 2021 compared to the first quarter of 2020. The increase was primarily due to increases in Income from equity investments in our O&P–EAI segment driven primarily by higher margins due to increased demand.

Income Taxes—Our effective income tax rate for the three months ended March 31, 2021 was 6.1% compared with 34.4% for the three months ended March 31, 2020. The lower effective tax rate was primarily attributable to the remeasurement of U.S. deferred tax liabilities that occurred in the prior year as a result of the CARES Act (-20.9%) and return to accrual adjustments primarily from a tax benefit associated with a step-up of certain Italian assets to fair market value (-11.3%). These drivers were partially offset by the reduced relative impact of our tax rate drivers, primarily exempt income, due to increased pre-tax earnings (7.1%).

Comprehensive Income—Comprehensive income increased by $1,534 million in the first quarter of 2021 compared to the first quarter of 2020, primarily due to higher net income, net favorable impacts of financial derivative instruments driven by periodic changes in benchmark interest rates and improved foreign currency translation adjustments.

In the first quarter of 2021 and 2020, the cumulative after-tax effects of our derivatives designated as cash flow hedges were net gains of $175 million and net losses of $338 million, respectively. Pre-tax gains of $223 million and pre-tax losses of $535 million related to forward-starting interest rate swaps were driven by periodic changes in benchmark interest rates in the first quarter of 2021 and 2020, respectively. The fluctuations of the U.S. dollar against the euro and the periodic changes in benchmark interest rates, in the first quarter of 2021 and 2020, resulted in pre-tax gains of $86 million and $147 million, respectively, related to our cross-currency swaps. Pre-tax losses of $92 million and $53 million related to our cross-currency swaps were reclassified from Accumulated other comprehensive loss to Interest expense in the first quarter of 2021 and 2020, respectively. The remaining change pertains to our commodity cash flow hedges.

The predominant functional currency for our operations outside of the U.S. is the euro. Relative to the U.S. dollar, the value of the euro decreased during the first quarter of 2021 and 2020, resulting in losses reflected in the Consolidated Statements of Comprehensive Income. The losses related to unrealized changes in foreign currency translation impacts were partially offset by pre-tax gains of $62 million and $39 million in the first quarter of 2021 and 2020, respectively, which represent the effective portion of our net investment hedges.

Segment Analysis

We use earnings 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”. For additional information related to our operating segments, as well as a reconciliation of EBITDA to its nearest GAAP measure, Income from continuing operations before income taxes, see Note 12 to our Consolidated Financial Statements.

Revenues and the components of EBITDA for the periods presented are reflected in the table below:

	Three Months Ended March 31,	
Millions of dollars	**2021**	**2020**
Sales and other operating revenues:		
O&P–Americas segment	$ 2,859	$ 1,792
O&P–EAI segment	3,047	2,224
I&D segment	1,767	1,770
APS segment	1,270	1,096
Refining segment	1,126	1,448
Technology segment	165	122
Other, including intersegment eliminations	(1,152)	(958)
Total	$ 9,082	$ 7,494
Operating income (loss):		
O&P–Americas segment	$ 687	$ 238
O&P–EAI segment	259	135
I&D segment	88	131
APS segment	104	70
Refining segment	(130)	(314)
Technology segment	82	47
Other, including intersegment eliminations	(2)	(3)
Total	$ 1,088	$ 304
Depreciation and amortization:		
O&P–Americas segment	$ 143	$ 124
O&P–EAI segment	53	53
I&D segment	80	70
APS segment	28	44
Refining segment	19	42
Technology segment	12	9
Total	$ 335	$ 342
Income (loss) from equity investments:		
O&P–Americas segment	$ 30	$ 2
O&P–EAI segment	95	(3)
I&D segment	12	2
APS segment	—	(1)
Total	$ 137	$ —

Millions of dollars	Three Months Ended March 31, 2021	2020
Other income (loss), net:		
O&P–Americas segment	$ 7	$ 2
O&P–EAI segment	5	4
I&D segment	2	—
APS segment	3	—
Refining segment	1	—
Other, including intersegment eliminations	7	(6)
Total	$ 25	$ —
EBITDA:		
O&P–Americas segment	$ 867	$ 366
O&P–EAI segment	412	189
I&D segment	182	203
APS segment	135	113
Refining segment	(110)	(272)
Technology segment	94	56
Other, including intersegment eliminations	5	(9)
Total	$ 1,585	$ 646

Olefins and Polyolefins–Americas Segment

Overview—EBITDA improved in the first quarter of 2021 relative to the first quarter of 2020 primarily due to higher olefin margins.

Ethylene Raw Materials—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 first quarter of 2021 and 2020 approximately 60% 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:

Millions of dollars	Three Months Ended March 31, 2021	2020
Sales and other operating revenues	$ 2,859	$ 1,792
Income from equity investments	30	2
EBITDA	867	366

Revenues—Revenues for our O&P–Americas segment increased by $1,067 million, or 60%, in the first quarter of 2021 compared to the first quarter of 2020.

Average sales prices were higher in the first quarter of 2021 compared to the first quarter of 2020 which resulted in a revenue increase of 50% in the first quarter of 2021. Volume improvements resulted in a revenue increase of 10% in the first quarter of 2021 primarily due to a full quarter of results associated with our Louisiana Joint Venture partially offset by the effects of unusually cold temperatures and associated electrical power outages that led to shutdowns of our manufacturing facilities in Texas.

EBITDA—EBITDA increased by $501 million, or 137%, in the first quarter of 2021 compared to the first quarter of 2020. First quarter of 2020 results included a $111 million LCM inventory valuation charge primarily driven by a decline in the price of heavy liquids and ethylene during the quarter. The absence of a similar charge in the first quarter 2021 resulted in a 30% change in EBITDA. The first full quarter of results for our newly formed Louisiana Joint Venture improved EBITDA by 36% during the quarter.

Including the results of the Louisiana Joint Venture, higher olefin results led to a 89% improvement in EBITDA in the first quarter of 2021, primarily due to ethylene variable margin improvements associated with higher sales prices. Polypropylene results led to a 12% increase in EBITDA in the first quarter of 2021, largely due to improved margins attributed to higher price spreads over propylene in the first quarter of 2021. Higher income from our equity investments led to increases in EBITDA of 7% in the first quarter of 2021 mainly attributable to improved results at our polypropylene joint venture in Mexico.

Olefins and Polyolefins–Europe, Asia, International Segment

Overview—EBITDA for the first quarter of 2021 increased compared to the first quarter of 2020 mainly as a result of higher polymer margins and equity income, partly offset by lower olefin margins.

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

	Three Months Ended March 31,	
Millions of dollars	**2021**	**2020**
Sales and other operating revenues	$ 3,047	$ 2,224
Income (loss) from equity investments	95	(3)
EBITDA	412	189

Revenues—Revenues increased by $823 million, or 37%, in the first quarter of 2021 compared to the first quarter of 2020.

Average sales prices in the first quarter of 2021 were higher across most products as sales prices generally correlate with crude oil prices, which on average, increased compared to the same period in 2020. These higher average sales prices were responsible for a revenue increase of 18% in the first quarter of 2021. Volume improvements resulted in a revenue increase of 12% in the first quarter of 2021 from strong polymer demand. Favorable foreign exchange impacts resulted in a revenue increase of 7% in the first quarter of 2021.

EBITDA—EBITDA increased by $223 million, or 118%, in the first quarter of 2021 compared to the first quarter of 2020. First quarter of 2020 results included a $36 million LCM inventory valuation charge primarily driven by a decline in the price of naphtha during the quarter. The absence of a similar charge in the first quarter 2021 resulted in a 19% change in EBITDA.

Improved polyethylene and polypropylene results increased EBITDA by 54% and 35%, respectively, in the first quarter of 2021. These improvements were largely attributed to higher margins due to strong demand. Lower olefins results led to a 51% decrease in EBITDA in the first quarter of 2021, primarily driven by lower margins attributable to increased feedstock costs. Higher income from our equity investments led to increases in EBITDA of 52% in the first quarter of 2021 mainly attributable to higher polyolefin margins due to increased demand. Favorable foreign exchange impacts resulted in a 11% increase in EBITDA in the first quarter of 2021.

Intermediates and Derivatives Segment

Overview—EBITDA declined in the first quarter of 2021 compared to the first quarter of 2020, primarily driven by lower volumes across most businesses, in particular propylene oxide and derivatives.

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

	Three Months Ended March 31,	
Millions of dollars	**2021**	**2020**
Sales and other operating revenues	$ 1,767	$ 1,770
Income from equity investments	12	2
EBITDA	182	203

Revenues—Revenues decreased by $3 million, remaining relatively flat, in the first quarter of 2021 compared to the first quarter of 2020. Lower sales volumes resulted in a 17% decline in sales, primarily driven by a decline in production due to the impact of unusually cold temperatures and associated electrical power outages that led to shutdowns of our manufacturing facilities in Texas. This decrease was largely offset by higher average sales prices in the first quarter of 2021 for most products as sales prices generally correlate with crude oil prices, which on average, increased compared to the same period in 2020. This increase in average sales prices resulted in a 14% increase in revenue. Favorable foreign exchange impacts also increased revenue by 3% in the first quarter of 2021.

EBITDA—EBITDA decreased by $21 million, or 10%, in the first quarter of 2021 compared to the first quarter of 2020. In the first quarter of 2020 EBITDA for our I&D segment included a $78 million LCM inventory valuation charge primarily driven by a decline in the price of various gasoline blending components and butane during the quarter. The absence of a similar charge in the first quarter 2021 resulted in a 38% change in EBITDA.

Oxyfuels and related products results declined, resulting in a 35% decrease in EBITDA in the first quarter of 2021. Approximately 60% of this decline was driven by a decrease in margins due to lower blending premium over gasoline prices, higher feedstock costs and higher utility costs related to Texas weather events. The remaining decrease was due to lower volumes driven by Texas weather events and lower gasoline demand. Declines in propylene oxide and derivatives results led to an EBITDA decrease of 12% in the first quarter of 2021. This decrease was a result of lower volumes driven by Texas weather events as discussed above and planned maintenance. Approximately half of this volume decrease was offset by margin improvements due to tight market supply. Intermediate chemicals results declined, contributing to a 10% decrease in EBITDA primarily due to a decrease in margins due to higher feedstock costs. Higher income from our equity investments led to increases in EBITDA of 5% in the first quarter of 2021 mainly attributable to improved results at our joint venture in China. Favorable foreign exchange impacts increased EBITDA by 4% in the first quarter of 2021.

Planned maintenance in 2021 is expected to reduce EBITDA by approximately $115 million, which is $30 million lower than previously estimated, due to reduced scope of work and associated downtime for the maintenance.

Advanced Polymer Solutions Segment

Overview—EBITDA for our APS segment increased in the first quarter of 2021 relative to the first quarter of 2020, primarily due to improved compounding and solution results and the absence of integration costs related to the acquisition of A. Schulman recognized in the first quarter of 2020.

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

Millions of dollars	Three Months Ended March 31, 2021	Three Months Ended March 31, 2020
Sales and other operating revenues	$ 1,270	$ 1,096
Income (loss) from equity investments	—	(1)
EBITDA	135	113

Revenues—Revenues increased by $174 million, or 16%, in the first quarter of 2021 compared to the first quarter of 2020. Foreign exchange impacts resulted in a revenue increase of 8% in the first quarter of 2021. Sales volumes increased in the first quarter of 2021 stemming from higher market demand for compounding and solutions, including higher automotive and construction demand, which led to a 4% increase in revenue. Average sales price increased resulting in a 4% increase in revenue in the first quarter of 2021.

EBITDA—EBITDA increased by $22 million, or 19%, in the first quarter of 2021 compared to the first quarter of 2020. Increased compounding and solutions results led to an EBITDA increase of 8% in the first quarter of 2021. This increase was mainly attributable to higher volumes driven by increased demand for our products utilized in the automotive and construction end markets in Asia and Europe. Integration activities related to our 2018 acquisition of A. Schulman Inc. were substantially completed during the third quarter of 2020. In the absence of these integration costs in the first quarter of 2021, EBITDA changed 12% during the quarter. Favorable foreign exchange impacts increased EBITDA by 6% in the first quarter 2021.

Refining Segment

Overview—EBITDA increased in the first quarter of 2021 relative to the first quarter of 2020 primarily due to the absence of an LCM inventory valuation charge which was recognized in the first quarter of 2020.

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.

Millions of dollars	Three Months Ended March 31, 2021	Three Months Ended March 31, 2020
Sales and other operating revenues	$ 1,126	$ 1,448
EBITDA	(110)	(272)
Thousands of barrels per day		
Heavy crude oil processing rates	152	226
Market margins, dollars per barrel		
Brent - 2-1-1	$ 10.57	$ 7.43
Brent - Maya differential	4.75	9.79
Total Maya 2-1-1	$ 15.32	$ 17.22

Revenues—Revenues decreased by $322 million, or 22%, in the first quarter of 2021 compared to the first quarter of 2020. Heavy crude oil processing rates decreased during the first quarter of 2021 due to planned and unplanned outages, including the effects of unusually cold temperatures and associated electrical power outages that led to shutdowns of our manufacturing facilities in Texas. This decline in sales volumes resulted in a 32% reduction in revenue. This decrease was partially offset by higher product prices, which led to a revenue increase of 10% due to an average Brent crude oil price increase of approximately $10 per barrel in the first quarter of 2021.

EBITDA—EBITDA increased by $162 million, or 60%, in the first quarter of 2021 compared to the first quarter of 2020. First quarter 2020 results included a $192 million LCM inventory valuation charge primarily driven by a decline in the price of crude oil and refined products, the absence of a similar charge in the first quarter 2021 resulted in a 71% change in EBITDA. This increase in the first quarter of 2021 was partially offset by a 7% decrease in EBITDA due to lower heavy crude oil processing rates driven by the impact of facility outages as discussed above and lower demand for transportation fuels. Margin declines resulted in a 4% decrease in EBITDA driven by a decrease in the Maya 2-1-1 market margin due to tighter heavy oil supply and a decrease in refined product demand as well as higher costs of Renewable Identification Numbers (“RINs”).

Technology Segment

Overview—EBITDA increased in the first quarter of 2021 compared to the first quarter of 2020, primarily due to higher licensing revenues.

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

	Three Months Ended March 31,	
Millions of dollars	**2021**	**2020**
Sales and other operating revenues	$ 165	$ 122
EBITDA	94	56

Revenues—Revenues increased by $43 million, or 35%, in the first quarter of 2021 compared to the first quarter of 2020. Higher licensing revenues resulted in a 20% increase in the first quarter of 2021 compared to the first quarter of 2020. Higher catalyst volumes resulted in a 8% increase in revenue in the first quarter of 2021 primarily driven by a strong demand. Favorable foreign exchange impact led to a revenue increase of 7% in the first quarter of 2021.

EBITDA—EBITDA increased by $38 million, or 68%, in the first quarter of 2021 compared to the first quarter of 2020. Higher licensing revenues from more contracts reaching significant milestones in the first quarter of 2021 compared to the first quarter of 2020 resulted in a 41% increase in EBITDA. Higher catalyst volumes resulted in a 14% increase in EBITDA. Foreign exchange impacts, which on average, were favorable led to a 9% increase in EBITDA in the first quarter of 2021.

FINANCIAL CONDITION

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

Millions of dollars	Three Months Ended March 31, 2021	2020
Cash provided by (used in) :		
Operating activities	$ 571	$ 542
Investing activities	(59)	(663)
Financing activities	(782)	884

Operating Activities—Cash provided by operating activities of $571 million in the first quarter of 2021 reflected earnings adjusted for non-cash items, payments for employee bonuses, income taxes, income from equity investments, and cash used by the main components of working capital—Accounts receivable, Inventories and Accounts payable.

In the first quarter of 2021, the main components of working capital used $626 million of cash driven primarily by an increase in Accounts receivable and Inventories partially offset by an increase in Accounts payable. The increase in Accounts receivable was driven by higher revenues for our O&P—Americas, O&P—EAI, and APS segments. The increase in Inventory was primarily driven by higher inventory volumes, due to lower crude oil consumption as a result of Texas weather events, and prices within our Refining segment. The increase in Accounts payables was primarily driven by increased raw material costs.

Cash provided by operating activities of $542 million in the first quarter of 2020 reflected earnings adjusted for non-cash items, payments for employee bonuses, income taxes, and cash consumed by the main components of working capital.

In the first quarter of 2020, the main components of working capital used $110 million of cash driven primarily by a decrease in Accounts payable partially offset by a decrease in Inventories. The decrease in Accounts payable was primarily due to lower feedstock prices in our O&P–EAI segment as well as a decrease in crude oil purchases in our Refining segment. The decrease in Inventory was primarily driven by company-wide inventory reduction initiatives as well as higher sales volumes in our O&P–EAI segment compared to the fourth quarter 2019 and turnaround activities in our I&D segment.

Investing Activities—We invest cash in investment-grade and other high-quality instruments that provide adequate flexibility to redeploy funds as needed to meet our cash flow requirements while maximizing yield.

In the first quarters of 2021 and 2020 we received proceeds of $226 million and $1 million, respectively, from our investments in equity securities. Additionally, we received proceeds of $74 million in the first quarter of 2021 upon the maturity of certain available-for-sale debt securities.

Capital expenditures for the first three months of 2021 totaled $340 million compared to $660 million for the first three months of 2020, resulting in a decrease of $320 million or 48% in 2021 compared to 2020. Reduced spending within our I&D segment accounted for 32% of the decline which was driven by decreased spending at our PO/TBA plant. Additionally, spending in our O&P—Americas segment decreased by 21% due to the completion of our *Hyperzone* polyethylene plant in 2020 and a decline in other plant improvement projects in 2021. See Note 12 to the Consolidated Financial Statements for additional information regarding capital spending by segment.

Financing Activities—We made dividend payments totaling $352 million and $351 million in the first quarters of 2021 and 2020, respectively.

In January 2021, we repaid $500 million outstanding under our Term Loan due 2022.

In the first quarters of 2021 and 2020 we received a return of collateral of $66 million and posted collateral of $238 million, respectively, related to the positions held with our counterparties for certain forward-starting interest rate swaps.

In March 2020, we borrowed $500 million from our Senior Revolving Credit Facility and $500 million from our U.S. Receivables Facility to increase our liquidity.

In the first quarter 2020, we received net proceeds of $516 million, through the issuance and repurchase of commercial paper instruments under our commercial paper program.

Additional information related to the issuance of debt and commercial paper can be found in Note 6 to the Consolidated Financial Statements.

Liquidity and Capital Resources

Overview

We plan to fund our ongoing working capital, capital expenditures, debt service and other funding 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. Cash and cash equivalents, cash from our short-term investments, cash from operating activities, proceeds from the issuance of debt, or a combination thereof, may be used to fund the purchase of shares under our share repurchase authorization.

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 deployment strategy. In the near term, we are prioritizing debt reduction on our balance sheet.

Cash and Liquid Investments

As of March 31, 2021, we had Cash and cash equivalents and marketable securities classified as Short-term investments totaling $1,835 million, which includes $1,197 million in jurisdictions outside of the U.S., principally in the United Kingdom. There are currently no legal or economic restrictions that would materially impede our transfers of cash.

Credit Arrangements

At March 31, 2021, we had total debt, including current maturities, of $15,425 million, and $197 million of outstanding letters of credit, bank guarantees and surety bonds issued under uncommitted credit facilities.

We had total unused availability under our credit facilities of $2,905 million at March 31, 2021, which included the following:

- $2,005 million under our $2,500 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. A small portion of our availability under this facility is impacted by changes in the euro/U.S. dollar exchange rate. At March 31, 2021, we had $500 million of outstanding commercial paper, net of discount, 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 March 31, 2021, we had no borrowings or letters of credit outstanding under this facility.

We believe that our recent value-driven growth investments should benefit us over the coming years. With an improving outlook for cash generation, we remain committed to further strengthening our investment grade balance sheet through deleveraging. In January 2021, we repaid $500 million outstanding under our Term Loan due 2022. An additional $500 million was repaid in April 2021. We expect that our robust cash generation from operations should continue throughout the year and our top priority for capital deployment in 2021 is debt reduction, which will enable meaningful progress toward improving our credit metrics to two times total debt to EBITDA.

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.

In accordance with our current interest rate risk management strategy and subject to management’s evaluation of market conditions and the availability of favorable interest rates among other factors, we may from time to time enter into interest rate swap agreements to economically convert a portion of our fixed rate debt to variable rate debt or convert a portion of our variable rate debt to fixed rate debt.

CURRENT BUSINESS OUTLOOK

With no significant planned maintenance for our assets during the second quarter, we plan to operate at nearly full capacity worldwide to meet improved demand that is expected to persist due to low inventories and maintenance downtime across our industry. Strong North American integrated polyethylene margins should continue as U.S. producers seek to fulfill domestic order backlogs, rebuild inventories and serve export demand. During the second half of 2021, increased mobility should drive higher demand for gasoline and jet fuel, improving margins for our Refining and I&D segments. We also expect that moderating feedstock costs will increase second quarter margins for our Advanced Polymer Solutions segment.

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 and Section 21E of the Securities Exchange Act of 1934. 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 fall materially, or remain low relative to U.S. natural gas prices, we would 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; for example, because the Houston refinery is our only refining operation, we would not have the ability to increase production elsewhere to mitigate the impact of any outage at that facility;

- 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 new businesses and assets and integrate those operations into our existing operations and make cost-saving changes in operations;

- 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;

- uncertainties related to the extent and duration of the pandemic-related decline in demand, or other impacts due to the pandemic in geographic regions or markets served by us, or where our operations are located, including the risk of prolonged recession;

- 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 agreements or treaties, or changes in 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 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 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, 2020. Our exposure to such risks has not changed materially in the three months ended March 31, 2021.

Item 4. CONTROLS AND PROCEDURES

As of March 31, 2021, 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 March 31, 2021.

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

Additional information about our other environmental proceedings can be found in Part I, Item 3 of our 2020 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, 2020.

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

None.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

Item 6. EXHIBITS

Exhibit Number	Description
10.1*+	2021 Form of Restricted Stock Unit Award Agreement
10.2*+	2021 Form of Performance Share Unit Award Agreement
10.3*+	2021 Form of Non-Qualified Stock Option Award Agreement
22*	Subsidiary Issuers of Guaranteed Securities
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)

+ Management contract or compensatory plan, contract or arrangement
* 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: April 30, 2021

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

LYONDELLBASELL INDUSTRIES
2021 RESTRICTED STOCK UNIT AWARD AGREEMENT

By letter (the “Grant Letter”), effective as of the date specified in the Grant Letter (the “Grant Date”), LyondellBasell Industries N.V. (the “Company”), pursuant to the LyondellBasell Industries Long-Term Incentive Plan, as amended and restated effective May 31, 2019 (the “Plan”), has granted to the Participant the number of units of Common Stock (as defined in the Plan) specified in the Grant Letter subject to transfer and forfeiture restrictions (“Restricted Stock Units”). These grants are all subject to adjustment as provided in the Plan, and the following terms and conditions (the “Award Agreement”):

1. Relationship to Plan and Company Agreements.

This Restricted Stock Unit grant is subject to all Plan terms, conditions, provisions and administrative interpretations, if any, adopted by the Committee. Except as defined in this Award Agreement, capitalized terms have the same meanings ascribed to them in the Plan. To the extent that this Award Agreement is intended to satisfy the Company’s obligations under any employment agreement between the Company and the Participant, the Participant agrees and acknowledges that this Award Agreement fulfills the Company’s obligations under the employment agreement, this Award Agreement shall be interpreted and construed to the fullest extent possible consistent with such employment agreement, and in the event of a conflict between the terms of such employment agreement and the terms of this Award Agreement, the terms of this Award Agreement shall control.

2. Restriction Period and Vesting Schedule.

(a) The Restriction Period applicable to the Restricted Stock Units shall lapse and Restricted Stock Units shall fully vest on the third anniversary of the Grant Date. The Participant must be in continuous employment from the Grant Date through the third anniversary of the Grant Date to vest in Restricted Stock Units on that date.

(b) If the Participant has been in continuous employment since the Grant Date, the Restriction Period shall lapse and the Restricted Stock Units shall become fully vested, irrespective of the limits in subparagraph (a), upon (1) an involuntary termination of employment by the Company without Cause or a constructive termination of employment by the Participant with good reason as defined in Section 10 of the Plan, either of which occurs within one year after the occurrence of a Change of Control or (2) any termination of employment due to death or Disability.

(c) Notwithstanding paragraph (a), the Restriction Period shall lapse and the Restricted Stock Units shall fully vest on the third anniversary of the Grant Date if Participant terminates employment due to Enhanced Retirement.

(d) Notwithstanding paragraph (a), provided that the Participant has been in continuous employment since the Grant Date, upon termination of employment due to Retirement or involuntary termination not for Cause, the Restriction Period shall lapse with respect to a pro rata portion of the Restricted Stock Units which shall be determined by multiplying the full number of Restricted Stock Units otherwise payable under this Award Agreement by a fraction, the numerator of which is the number of months (with any partial months being considered a full month) of the Participant’s employment during the period beginning on the Grant Date and ending on the third anniversary of the Grant Date and the denominator of which is the number of months in such period. Remaining Restricted Stock Units shall be forfeited. If the Participant is eligible for Enhanced Retirement, this paragraph (d) shall not apply and paragraph (c) shall control, unless the Participant affirmatively elects to decline Enhanced Retirement and accept pro-rata lapse of the Restriction Period and forfeiture of remaining Restricted Stock Units under this paragraph, in which case Section 13 shall not apply.

(e) The following definitions apply to this Award Agreement:

(i) "Disability" means (i) a permanent and total disability as defined in the Company's long-term disability plan in which the Participant is eligible to participate and (ii) the Participant is not eligible for Retirement.

(ii) "Enhanced Retirement" means a Participant's voluntarily initiated termination of service on or after age 60 with 10 years of service with the Company and/or an Affiliate.

(iii) "Misconduct" means any act or failure to act that (i) contributes to the Company having to restate all or a portion of its financial statements and materially increases the value of the compensation received by the Participant and/or (ii) caused or was intended to cause a violation of the policies of the Company or Affiliate.

(iv) "Retirement" means a Participant's voluntarily initiated termination of service on or after the earliest of (i) age 55 with 10 years of service with the Company and/or an Affiliate, (ii) the time of retirement as defined in a written agreement between a Participant and a Participating Employer, or (iii) outside the U.S., the time when retirement is permitted and the Participant is eligible to receive a company retirement benefit under applicable law with respect to the Participant's primary place of employment (as determined by the Committee in its sole judgment).

3. Terms and Conditions.

Each Restricted Stock Unit shall be subject to the restrictions below and a substantial risk of forfeiture during the Restriction Period. A Participant shall not be entitled to any payment under Section 5 until the Restriction Period for affected Restricted Stock Units lapses. No rights related to a Restricted Stock Unit may be sold, transferred, assigned, pledged or otherwise encumbered or disposed of during the Restriction Period. Restricted Stock Units shall be forfeited on the date the Participant's employment terminates except as otherwise provided in Section 2 hereof.

4. Registration of Units.

The Participant's right to receive Common Stock in settlement of the Restricted Stock Units shall be evidenced by book entry (or by such other manner as the Committee may determine)

5. Settlement.

Subject to Section 14 hereof, when the Restriction Period lapses and Restricted Stock Units vest under Section 2, a Participant shall become entitled to receive, within 60 days of the date the Restricted Stock Units vested, the number of shares of Common Stock equal to the number of Restricted Stock Units which have vested on the particular vesting date. Any shares of Common Stock paid under this Award shall remain subject to the Company Clawback Policy as set forth in Section 14.

6. Dividend Equivalents.

The Company will pay Dividend Equivalents for each outstanding Restricted Stock Unit as soon as administratively practicable after dividends, if any, are paid on the Company's outstanding shares of Common Stock; provided, however, that such payment shall be made no later than March 15th following the year in which the dividends are paid.

7. Withholding.

The Company shall withhold from any distribution under this Award shares of Common Stock having a Fair Market Value equal to all taxes required to be withheld with respect to the Award. In the event all federal, state and other governmental withholding tax requirements imposed upon the Company with respect to the Award cannot be satisfied in this manner, no shares of Common Stock shall be delivered to or for a Participant unless provision to pay required withholding has been made to the Committee's satisfaction.

8. Expatriate Participants.

Payments of Awards made to expatriate Participants will be, pursuant to the applicable expatriate assignment policy of the Participating Employer, tax normalized based on typical income taxes and social security taxes in the expatriate Participant's home country relevant to the expatriate Participant's domestic circumstances.

9. No Fractional Shares.

No fractional shares of Common Stock are permitted in connection with this Award Agreement. For purposes of pro-ration in Section 2(d), Restricted Stock Units shall be rounded up to the nearest whole share of Common Stock. Any shares of Common Stock withheld pursuant to Section 7 shall be rounded to whole shares in the manner determined by the Committee to be appropriate to satisfy the minimum statutory withholding requirements.

10. Successors and Assigns.

This Award Agreement shall bind and inure to the benefit of and be enforceable by the Participant, the Company and their respective permitted successors and assigns (including personal representatives, heirs and legatees), but the Participant may not assign any rights or obligations under this Award Agreement except to the extent and in the manner expressly permitted.

11. No Guaranteed Employment.

No provision of this Award Agreement shall confer any right to continued employment.

12. Section 409A.

It is intended that the provisions of this Award Agreement satisfy the requirements of Section 409A of the Code and the accompanying U.S. Treasury Regulations and pronouncements thereunder, and that the Award Agreement be operated in a manner consistent with such requirements to the extent applicable.

For purposes of Section 409A of the Code, (a) if the Participant is Retirement Eligible, the time of settlement in Section 5 hereof constitutes a specified date within the meaning of Section 1.409A-3(a)(4) of the Treasury Regulations and is within the 90-day period described in Section 1.409A-3(b) of the Treasury Regulations and (b) if the Participant is not Retirement Eligible, the time of settlement in Section 5 hereof is within the short-term deferral period described in Section 1.409A-1(b)(4) of the Treasury Regulations. For purposes of this Section 12, "Retirement Eligible" means that the Participant will be eligible to terminate employment by reason of Retirement or Enhanced Retirement, prior to the date such Retirement or Enhanced Retirement would qualify for short-term deferral treatment under Section 409A of the Code.

If the Company is publicly-traded and the Participant is identified by the Company as a "specified employee" within the meaning of Section 409A(a)(2)(B)(i) of the Code on the date on which the Participant has a "separation from service" (other than due to death) within the meaning of Section 1.409A-1(h) of the Treasury Regulations, notwithstanding the provisions of Section 5 hereof, any transfer of shares payable on account of a separation from service that are deferred compensation shall take place on the earlier of (i) the first business day following the expiration of six months from the Participant's separation from service, (ii) the date of the Participant's death, or (iii) such earlier date as complies with the requirements of Section 409A of the Code.

13. Restrictive Covenants.

(a) This Section 13 shall apply only if the Participant is eligible for Enhanced Retirement and the Restriction Period lapses under Section 2(c).

(b) Acknowledgment of Access to Confidential Information and Trade Secrets. Participant agrees and acknowledges that during employment with the Company, Participant will be provided with, develop, and will use confidential and proprietary information and trade secrets of the Company. The confidential and proprietary information and trade secrets include, but are not limited to, the Company's business strategies, non-public financial information, identities of clients and suppliers, pricing and margin information, and any other information that Participant receives as a result of employment with the Company and that provides the Company with an economic benefit from being confidential, whether in written, tangible, electronic or any other form or media (collectively, "Confidential Information"). Confidential Information does not apply to such information which is known to the public so long as such knowledge does not result from a breach of any provision of this Award Agreement by Participant.

(c) Protection of Company Confidential Information and Trade Secrets. Except as expressly authorized by the Company or in order to carry out the duties and responsibilities as an employee for the Company, Participant will not disclose, directly or indirectly, in any way to anyone the Company's Confidential Information or improperly make use of Confidential Information both during employment with the Company and at any time after employment with the Company terminates. Pursuant to 18 U.S.C. USC § 1833(b), and as set forth fully therein, notice is hereby given that an individual shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that is made in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney, solely for the purpose of reporting or investigating a suspected violation of law; or is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. An individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the attorney of the individual and use the trade secret information in the court proceeding, if the individual files any document containing the trade secret under seal and does not disclose the trade secret, except pursuant to court order.

(d) Non-Competition. Participant agrees that for a period of twenty-four (24) months following the date Participant's employment with the Company ends, Participant shall not (i) perform any duties or responsibilities which are similar to those Participant performed on behalf of the Company in the twenty-four (24) months prior to termination of employment for any person or entity who offers services or products, or both, competitive to those offered by the Company at the time of termination of employment, or (ii) perform any duties or responsibilities for any person or entity whereby Participant uses (or may use) Confidential Information of the Company. This restriction shall apply in any geographic area in which the Company does business as of the date of termination of employment.

(e) Non-Interference of Company Relationships. Participant agrees that for a period of twenty-four (24) months following the date Participant's employment with the Company ends, Participant shall not, directly or indirectly, influence, induce, solicit or otherwise take action intended to disrupt, limit or interfere with any customer, supplier, or vendor relationship which Participant had responsibility for or learned Confidential Information about in the twenty-four (24) months preceding the termination of employment.

(f) Non-Solicitation of Employees. Participant agrees that for a period of twenty-four (24) months following the date Participant's employment with the Company ends, Participant shall not, directly or indirectly, influence, induce, solicit or otherwise take action intended to disrupt, limit or interfere with the relationship of the Company and any employee with whom Participant interacted or knew about through employment at the Company in the twenty-four (24) months preceding the termination of employment.

(g) Non-Disparagement. Participant agrees that Participant shall not at any time engage in any form of conduct, or make any statement or representation, either oral or written, that disparages, impugns or otherwise impairs the reputation, goodwill or interests of the Company, or any of its officers, directors, shareholders, representatives, and/or employees or agents in either the individual or representative capacities of any of the foregoing individuals (including, without limitation, the repetition or distribution of derogatory rumors, allegations, negative reports or comments). Nor shall Participant direct, arrange or encourage others to make any such derogatory or disparaging statements on Participant's behalf. Nothing in this paragraph, however, shall prevent Participant from providing truthful testimony or information in any proceeding or in response to any request from any governmental agency, or judicial, arbitral or self-regulatory forum, or as otherwise required by applicable law.

(h) Cooperation. Participant agrees to cooperate with the Company by making Participant reasonably available to testify on behalf of the Company in any action, suit, or proceeding, whether civil, criminal, administrative, or investigative, and to assist the Company in any such action, suit, or proceeding, by providing information and meeting and consulting with the Company and its employees, representatives and counsel.

(i) Irreparable Harm. Participant acknowledges that the Company has a legitimate need to protect itself from improper or unfair competition and to protect its Confidential Information, as well as the Company's relationships with its business partners and employees, and that the restrictions contained in this Award Agreement are reasonable and necessary to protect the Company's operations, legitimate competitive interests, and Confidential Information. Participant also recognizes the highly competitive nature of the Company's business and that irreparable harm would be caused by Participant's violation of the restrictions contained herein.

(j) Remedies. Participant agrees that the Company's remedies at law for any violation of this Agreement are inadequate and that the Company has the right to seek injunctive relief in addition to any other remedies available to it. Therefore, if Participant breaches or threatens to breach this Agreement, the Company is entitled to specific performance and injunctive relief, in addition to any other remedies, including but not limited to monetary damages, without the posting of a bond. Participant further agrees to pay any and all legal fees, including without limitation, all attorneys' fees, court costs, and any other related fees and/or costs incurred by the Company in enforcing this Award Agreement. Participant further agrees that a court may extend the duration of the restrictions in Section 13 of this Award Agreement equal to any period of time in which Participant is in violation of this Award Agreement.

14. Company Clawback Policy.

(a) If (i) the Committee determines that the Participant has either engaged in, or benefitted from, Misconduct and (ii) the Participant is classified at a level of M-4 or above in the LyondellBasell Group compensation classification system at the time of such determination, upon notice from the Company, the Participant shall reimburse to the Company all or a portion of any amounts (whether in cash or shares) received under this Award Agreement (or forfeit all or any portion of this Award to the extent it has not yet been received) as the Committee deems appropriate under the circumstances. Such notice shall be provided within the earlier to occur of one year after discovery of the alleged Misconduct or the second anniversary of the Participant's date of termination.

(b) If the Committee determines that the Participant has violated any of the obligations set forth in Section 13 of this Agreement, upon notice from the Company, the Participant shall reimburse to the Company all or a portion of any amounts (whether in cash or shares) received under this Award Agreement (or forfeit all or any portion of this Award to the extent it has not yet been received) as the Committee deems appropriate under the circumstances. Such notice shall be provided within the earlier to occur of one year after discovery of the alleged violation or the second anniversary of the Participant's Date of Termination.

15. Choice of Law.

This Award Agreement shall be governed by the laws of the State of Texas, without regard to conflict of laws principles.

16. Jurisdiction and Forum.

Any action arising out of this Award Agreement or the relationship between the parties established herein shall be brought only in the state or federal courts of the State of Texas, and Participant hereby consents to and submits to the exclusive jurisdiction of such courts.

17. Savings Clause.

It is expressly understood and agreed that although the Company and Participant consider the restrictions contained in Section 13 of this Award Agreement to be reasonable for the purpose of preserving the Company's Confidential Information, as well as the Company's relationships with its business partners and employees, if any restrictive covenant set forth in Section 13 is found by any court having jurisdiction to be invalid or unreasonable, the restrictive covenant shall be limited and reduced so as to contain the maximum restrictions permitted by applicable law. The restrictive covenants set forth in Section 13 shall be interpreted consistent with, and limited to the extent necessary to comply with, applicable rules of professional conduct. All remaining provisions of this Award Agreement, and/or portions thereof, shall remain in full force and effect.

18. Waiver.

The Company's failure to enforce any provision(s) of this Award Agreement shall not in any way be construed as a waiver of any such provision(s), or prevent the Company thereafter from enforcing each and every other provision of this Award Agreement.

LYONDELLBASELL INDUSTRIES N.V.

Note: For Mr. Rhenman, our Executive Vice President, Intermediates and Derivatives, and Refining, "Retirement" also includes an executive's voluntarily initiated termination of service on or after age 65.

LYONDELLBASELL INDUSTRIES
2021 PERFORMANCE SHARE UNIT AWARD AGREEMENT

By letter (the "Grant Letter"), effective as of the date specified in the Grant Letter (the "Grant Date"), LyondellBasell Industries N.V. (the "Company"), pursuant to the LyondellBasell Industries Long-Term Incentive Plan, as amended and restated effective May 31, 2019 (the "Plan"), has granted to the Participant a number of Stock Units (as defined in the Plan) equal to the Target multiplied by the Earned Percentage certified for the Performance Cycle, subject to the vesting provisions specified herein (the "PSU Award"). The applicable Target and Performance Cycle are set forth in the Grant Letter. The Earned Percentage shall be determined after the Performance Cycle based on the Performance Goals specified in the Grant Letter. This PSU Award is subject to adjustment as provided in the Plan, and the following terms and conditions (the "Award Agreement"):

1. **Relationship to Plan and Company Agreements.**

This PSU Award is a Performance Award under the Plan and is subject to all applicable Plan terms, conditions, provisions and administrative interpretations, if any, adopted by the Committee. Except as defined in this Award Agreement, capitalized terms have the same meanings ascribed to them in the Plan. This Award Agreement is intended to satisfy any obligation of the Company to provide a performance share unit award to the Participant under any employment agreement between the Company and the Participant or otherwise, and the Participant agrees and acknowledges that this Award Agreement fulfills the Company's obligations under the employment agreement, this Award Agreement shall be interpreted and construed to the fullest extent possible consistent with such employment agreement, and in the event of a conflict between the terms of such employment agreement and the terms of this Award Agreement, the terms of this Award Agreement shall control.

2. **Definitions.**

The following definitions apply to this Award Agreement:

(a) "Date of Termination" means the date on which the Participant ceases to be an Employee.

(b) "Disability" means a permanent and total disability as defined in the applicable long-term disability plan of the Participating Employer. "Disabled" has the correlative meaning.

(c) "Earned Percentage" means the percentage of the Target that is earned during the Performance Cycle. The Earned Percentage is multiplied by the Target to determine the number of Stock Units granted under this PSU Award. The Earned Percentage shall be determined in accordance with the following:

(i) Following the close of the Performance Cycle, the Committee shall determine and certify the Earned Percentage for the Performance Cycle.

(ii) The Earned Percentage shall not exceed 200 percent.

(iii) In the event any action or failure to act by the Participant constitutes Cause, the Committee may reduce the Participant's Earned Percentage to the extent the Committee deems appropriate under the circumstances.

(iv) In the event of a Change of Control, the Earned Percentage shall be calculated by reference to the attainment of Performance Goals as of the close of the last quarter ending on or before the Change of Control.

(d) "Enhanced Retirement" means the Participant's voluntarily initiated termination of service on or after age 60 with 10 years of service with the Company and/or an Affiliate.

(e) “Misconduct” means any act or failure to act that (i) contributes to the Company having to restate all or a portion of its financial statements and materially increases the value of the compensation received by the Participant and/or (ii) caused or was intended to cause a violation of the policies of the Company or Affiliate.

(f) “Performance Cycle” means the three-calendar-year period set forth in the Grant Letter.

(g) “Performance Goals” means the performance goal or goals as set forth in the Grant Letter.

(h) “Retirement” means the Participant’s voluntarily initiated termination of service on or after (i) age 55 with 10 years of service with the Company and/or an Affiliate, (ii) the time of retirement as defined in a written agreement between a Participant and the Company or an Affiliate, or (iii) outside the U.S., the time when retirement is permitted and the Participant is eligible to receive a retirement benefit from the Company or an Affiliate under applicable law with respect to the Participant’s primary place of employment (as determined by the Committee in its sole judgment).

(i) “Target” means the projected target number of Stock Units, as determined by the Committee and set forth in the Grant Letter, that may be payable to the Participant in satisfaction of this Award Agreement if the Committee determines that all Performance Goals for the Performance Cycle have been achieved and certifies an Earned Percentage of 100%.

3. **Vesting Schedule.**

(a) The PSU Award shall fully vest upon the date following the end of the Performance Cycle upon which the Committee certifies the Earned Percentage applicable to the Performance Cycle (“Vesting Date”), provided that the Participant is in continuous employment with a Participating Employer from the Grant Date through the Vesting Date. Except as provided below, the PSU Award shall be forfeited if the Participant terminates employment prior to the Vesting Date.

(b) Notwithstanding paragraph (a), Participant shall become vested in the PSU Award upon the Vesting Date, provided that Participant terminates employment prior to the Vesting Date due to an Enhanced Retirement.

(c) Notwithstanding paragraph (a), the Participant shall become vested in a pro-rated portion of the PSU Award upon the earliest of (i) the date the Participant becomes Disabled while employed by a Participating Employer or (ii) the Participant’s Date of Termination due to Retirement, death or involuntary termination not for Cause. The portion of the PSU Award that shall vest under this paragraph shall be determined by multiplying the number of Stock Units granted under the PSU Award (which is equal to product of the Target and the Earned Percentage for the Performance Cycle) by a fraction, the numerator of which shall be the number of whole calendar months of the Participant’s employment in such Performance Cycle ending on the earliest of the date of Disability or Date of Termination, as applicable, and the denominator of which shall be the number of whole calendar months in the Performance Cycle; provided that for purposes of this Section 3(c), partial service in a calendar month shall be considered service for the whole calendar month. If the Participant is eligible for Enhanced Retirement, this paragraph (c) shall not apply and paragraph (b) shall control, unless the Participant affirmatively elects to decline Enhanced Retirement and accept pro-rata vesting of the PSU Award under this paragraph, in which case Section 14 shall not apply.

(d) Notwithstanding paragraph (a), upon a Change of Control, the Earned Percentage shall be calculated by reference to the attainment of Performance Goals as of the close of the last quarter ending on or before the Change of Control in accordance with Section 2(c)(iv). Following the Change of Control, the Participant shall fully vest in the PSU Award on the last day of the Performance Cycle, if the Participant is in continuous employment with a Participating Employer from the Grant Date through such date or the Participant's Date of Termination prior to such date was due to an Enhanced Retirement and shall forfeit the PSU Award if the Participant terminates prior to vesting and without qualifying for an Enhanced Retirement. Notwithstanding the foregoing, the Participant shall become vested in a pro-rated portion of the PSU Award upon the earlier to occur of (i) a vesting event under Section 3(c) or (ii) an involuntary termination of employment of the Participant within one year following the Change of Control for any reason other than Cause (including a constructive termination of employment for good reason (as defined in Section 10 of the Plan)). The portion that shall vest shall be determined by multiplying the number of Stock Units granted under the PSU Award (which is equal to product of the Target and the Earned Percentage determined at the time of the Change of Control) by a fraction, the numerator of which shall be the number of whole calendar months of the Participant's employment in such Performance Cycle ending on the earliest vesting event and the denominator of which shall be the number of whole calendar months in the Performance Cycle. For this purpose, partial service in a calendar month shall be considered service for the whole calendar month.

(e) Notwithstanding the foregoing, in the event a Participant: (1) takes a leave of absence from the Company for personal reasons or as a result of entry into the Armed Forces of the United States, or (2) terminates employment for reasons which, in the judgment of the Committee, are deemed to be special circumstances, the Committee may consider such circumstances and may take such action (to the extent consistent with Section 409A of the Code) as it may deem appropriate under the circumstances, including extending the rights of a Participant to continue participation in the Plan beyond his Date of Termination; provided, however, that in no event may participation be extended beyond the term of the Performance Cycle in question.

(f) Notwithstanding the foregoing, if the entity that is deemed to be the plan sponsor with respect to this PSU Award is or becomes a "nonqualified entity" (within the meaning of Section 457A(b) of the Code and applicable guidance thereunder), the provisions of Sections 3(b), 3(c), 3(d) and 3(e) shall not apply with respect to any Participant who is a U.S. taxpayer if and to the extent such provisions would cause any amounts payable hereunder to be subject to Section 457A of the Code.

(g) For all purposes of this PSU Award, involuntary termination not for Cause does not include the Participant's voluntary termination of employment pursuant to a voluntary separation plan of a Participating Employer.

4. **Terms and Conditions.**

The Participant shall not be entitled to any payment under Section 6 until the PSU Award vests under Section 3. No rights related to the PSU Award may be sold, transferred, assigned, pledged or otherwise encumbered or disposed of prior to the vesting of the PSU Award. The PSU Award shall be forfeited on the date the Participant's employment terminates except as otherwise provided in this Award Agreement.

5. **Registration of Units.**

The Participant's right to receive Common Stock in settlement of the PSU Award shall be evidenced by book entry (or by such other manner as the Committee may determine).

6. **Settlement.**

When the PSU Award, or a portion thereof, vests under Section 3, the Participant shall become entitled to receive a number of shares of Common Stock equal to the number of Stock Units granted under the PSU Award that have vested. Subject to Section 13 hereof, such shares of Common Stock shall be paid in a single lump sum payment within ninety (90) days following the end of the Performance Cycle; provided, however, that in the event a pro-rata portion of the PSU Award vests upon an involuntary termination of employment of the Participant within one year following a Change of Control pursuant to Section 3(d), the shares of Common Stock shall be paid in a single lump sum payment within sixty (60) days after the Participant's termination of employment. Any shares of Common Stock paid under this PSU Award shall remain subject to the Company Clawback Policy as set forth in Section 15.

7. **Dividend Equivalents.**

If, prior to the date shares of Common Stock are settled on the Participant in accordance with Section 6, the Company declares a dividend on shares of Common Stock, then the Participant's Target shall be increased by the amount of the dividend the Participant would have received if he had been the actual owner on the dividend date of one share of Common Stock for each Stock Unit of the Participant's Target. The increase in the Target shall be calculated as follows:

(a) In the event of a stock dividend, the Target shall be increased by one Stock Unit for each share of Common Stock (rounded to the nearest whole share) the Participant would have received under the dividend.

(b) In the event of a cash dividend, after the Performance Cycle the Target shall be increased by the number of Stock Units determined by dividing the value of all cash dividends the Participant would have received during the Performance Cycle by the fair market value of one share of Common Stock as of the last day of the Performance Cycle (rounded to the nearest whole share).

Any increase in the Target granted under this Section 7 shall be subject to the same terms and conditions as the original Target and shall vest and be forfeited (if applicable) at the same time as the original Target.

8. **Withholding.**

The Company shall withhold from the PSU Award shares of Common Stock having a Fair Market Value equal to all taxes required to be withheld with respect to the award of the PSU Award. In the event all federal, state and other governmental withholding tax requirements imposed upon the Company with respect to the PSU Award cannot be satisfied in this manner, no shares of Common Stock shall be delivered to or for a Participant unless provision to pay required withholding has been made to the Committee's satisfaction.

9. **Expatriate Participants.**

Payments of Awards made to expatriate Participants will be, pursuant to the applicable expatriate assignment policy of the Participating Employer, tax normalized based on typical income taxes and social security taxes in the expatriate Participant's home country relevant to the expatriate Participant's domestic circumstances.

10. **No Fractional Shares.**

No fractional shares of Common Stock are permitted in connection with this Award Agreement. Any fractional number of Stock Units payable under the PSU Award shall be rounded up to the nearest whole share of Common Stock. Any shares of Common Stock withheld pursuant to Section 8 shall be rounded to whole shares in the manner determined by the Committee to be appropriate to satisfy the minimum statutory withholding requirements.

11. **Successors and Assigns.**

This Award Agreement shall bind and inure to the benefit of and be enforceable by the Participant, the Company and their respective permitted successors and assigns (including personal representatives, heirs and legatees), but the Participant may not assign any rights or obligations under this Award Agreement except to the extent and in the manner expressly permitted.

12. **No Guaranteed Employment.**

No provision of this Award Agreement shall confer any right to continued employment.

13. **Section 409A.**

It is intended that the provisions of this Award Agreement satisfy the requirements of Section 409A of the Code and the accompanying U.S. Treasury Regulations and pronouncements thereunder, and that the Award Agreement be operated in a manner consistent with such requirements to the extent applicable.

For purposes of Section 409A of the Code, (i) if the Participant vested pursuant to Section 3(b), 3(c) or 3(d), other than under clause (ii) of Section 3(d), the time of settlement under Section 6 constitutes a specified time within the meaning of Section 1.409A-3(a)(4) of the Treasury Regulations and (ii) if the Participant vested pursuant to Section 3(a) or 3(d)(ii), the time of settlement under Section 6 is within the short-term deferral period described in Section 1.409A-1(b)(4) of the Treasury Regulations.

If the Participant is a U.S. taxpayer and is treated as a "specified employee" within the meaning of Section 409A as of the date of the Participant's termination, then any transfer of shares payable upon the Participant's "separation from service" within the meaning of Section 409A which are subject to the provisions of Section 409A and are not otherwise excluded under Section 409A and would otherwise be payable during the first six-month period following such separation from service shall be paid on the fifteenth business day next following the earlier of (1) the expiration of six months from the date of the Participant's termination or (2) the Participant's death.

14. **Restrictive Covenants.**

(a) This Section 14 shall apply solely if the Participant is eligible for Enhanced Retirement and the PSU Award vests under Section 3(b).

(b) Acknowledgment of Access to Confidential Information and Trade Secrets. Participant agrees and acknowledges that during employment with the Company, Participant will be provided with, develop, and will use confidential and proprietary information and trade secrets of the Company. The confidential and proprietary information and trade secrets include, but are not limited to, the Company's business strategies, non-public financial information, identities of clients and suppliers, pricing and margin information, and any other information that Participant receives as a result of employment with the Company and that provides the Company with an economic benefit from being confidential, whether in written, tangible, electronic or any other form or media (collectively, "Confidential Information"). Confidential Information does not apply to such information which is known to the public so long as such knowledge does not result from a breach of any provision of this Award Agreement by Participant.

(c) Protection of Company Confidential Information and Trade Secrets. Except as expressly authorized by the Company or in order to carry out the duties and responsibilities as an employee for the Company, Participant will not disclose, directly or indirectly, in any way to anyone the Company's Confidential Information or improperly make use of Confidential Information both during employment with the Company and at any time after employment with the Company terminates. Pursuant to 18 U.S.C. USC § 1833(b), and as set forth fully therein, notice is hereby given that an individual shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that is made in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney, solely for the purpose of reporting or investigating a suspected violation of law; or is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. An individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the attorney of the individual and use the trade secret information in the court proceeding, if the individual files any document containing the trade secret under seal and does not disclose the trade secret, except pursuant to court order.

(d) Non-Competition. Participant agrees that for a period of twenty-four (24) months following the date Participant's employment with the Company ends, Participant shall not (i) perform any duties or responsibilities which are similar to those Participant performed on behalf of the Company in the twenty-four (24) months prior to termination of employment for any person or entity who offers services or products, or both, competitive to those offered by the Company at the time of termination of employment, or (ii) perform any duties or responsibilities for any person or entity whereby Particpant uses (or may use) Confidential Information of the Company. This restriction shall apply in any geographic area in which the Company does business as of the date of termination of employment.

(e) Non-Interference of Company Relationships. Participant agrees that for a period of twenty-four (24) months following the date Participant's employment with the Company ends, Participant shall not, directly or indirectly, influence, induce, solicit or otherwise take action intended to disrupt, limit or interfere with any customer, supplier, or vendor relationship which Participant had responsibility for or learned Confidential Information about in the twenty-four (24) months preceding the termination of employment.

(f) Non-Solicitation of Employees. Participant agrees that for a period of twenty-four (24) months following the date Participant's employment with the Company ends, Participant shall not, directly or indirectly, influence, induce, solicit or otherwise take action intended to disrupt, limit or interfere with the relationship of the Company and any employee with whom Participant interacted or knew about through employment at the Company in the twenty-four (24) months preceding the termination of employment.

(g) Non-Disparagement. Participant agrees that Participant shall not at any time engage in any form of conduct, or make any statement or representation, either oral or written, that disparages, impugns or otherwise impairs the reputation, goodwill or interests of the Company, or any of its officers, directors, shareholders, representatives, and/or employees or agents in either the individual or representative capacities of any of the foregoing individuals (including, without limitation, the repetition or distribution of derogatory rumors, allegations, negative reports or comments). Nor shall Participant direct, arrange or encourage others to make any such derogatory or disparaging statements on Participant's behalf. Nothing in this paragraph, however, shall prevent Participant from providing truthful testimony or information in any proceeding or in response to any request from any governmental agency, or judicial, arbitral or self-regulatory forum, or as otherwise required by applicable law.

(h) Cooperation. Participant agrees to cooperate with the Company by making Participant reasonably available to testify on behalf of the Company in any action, suit, or proceeding, whether civil, criminal, administrative, or investigative, and to assist the Company in any such action, suit, or proceeding, by providing information and meeting and consulting with the Company and its employees, representatives and counsel.

(i) Irreparable Harm. Participant acknowledges that the Company has a legitimate need to protect itself from improper or unfair competition and to protect its Confidential Information, as well as the Company's relationships with its business partners and employees, and that the restrictions contained in this Award Agreement are reasonable and necessary to protect the Company's operations, legitimate competitive interests, and Confidential Information. Participant also recognizes the highly competitive nature of the Company's business and that irreparable harm would be caused by Participant's violation of the restrictions contained herein.

(j) Remedies. Participant agrees that the Company's remedies at law for any violation of this Agreement are inadequate and that the Company has the right to seek injunctive relief in addition to any other remedies available to it. Therefore, if Participant breaches or threatens to breach this Agreement, the Company is entitled to specific performance and injunctive relief, in addition to any other remedies, including but not limited to monetary damages, without the posting of a bond. Participant further agrees to pay any and all legal fees, including without limitation, all attorneys' fees, court costs, and any other related fees and/or costs incurred by the Company in enforcing this Award Agreement. Participant further agrees that a court may extend the duration of the restrictions in Section 14 of this Award Agreement equal to any period of time in which Participant is in violation of this Award Agreement.

15. **Company Clawback Policy.**

(a) If (i) the Committee determines that the Participant has either engaged in, or benefitted from, Misconduct and (ii) the Participant is classified at a level of M-4 or above in the LyondellBasell Group compensation classification system at the time of such determination, upon notice from the Company, the Participant shall reimburse to the Company all or a portion of any amounts (whether in cash or shares) received under this PSU Award (or forfeit all or any portion of this PSU Award to the extent it has not yet been received) as the Committee deems appropriate under the circumstances. Such notice shall be provided within the earlier to occur of one year after discovery of the alleged Misconduct or the second anniversary of the Participant's Date of Termination.

(b) If the Committee determines that the Participant has violated any of the obligations set forth in Section 14 of this Award Agreement, upon notice from the Company, the Participant shall reimburse to the Company all or a portion of any amounts (whether in cash or shares) received under this Award Agreement (or forfeit all or any portion of this PSU Award to the extent it has not yet been received) as the Committee deems appropriate under the circumstances. Such notice shall be provided within the earlier to occur of one year after discovery of the alleged violation or the second anniversary of the Participant's Date of Termination.

16. **Choice of Law.**

This Award Agreement shall be governed by the laws of the State of Texas, without regard to conflict of laws principles.

17. **Jurisdiction and Forum.**

Any action arising out of this Award Agreement or the relationship between the parties established herein shall be brought only in the state or federal courts of the State of Texas, and Participant hereby consents to and submits to the exclusive jurisdiction of such courts.

18. **Savings Clause.**

It is expressly understood and agreed that although the Company and Participant consider the restrictions contained in Section 14 of this Award Agreement to be reasonable for the purpose of preserving the Company's Confidential Information, as well as the Company's relationships with its business partners and employees, if any restrictive covenant set forth in Section 14 of this Award Agreement is found by any court having jurisdiction to be invalid or unreasonable, the restrictive covenant shall be limited and reduced so as to contain the maximum restrictions permitted by applicable law. The restrictive covenants set forth in Section 14 of this Award Agreement shall be interpreted consistent with, and limited to the extent necessary to comply with, applicable rules of professional conduct. All remaining provisions of this Award Agreement, and/or portions thereof, shall remain in full force and effect.

19. **Waiver.**

The Company's failure to enforce any provision(s) of this Award Agreement shall not in any way be construed as a waiver of any such provision(s) or prevent the Company thereafter from enforcing each and every other provision of this Award Agreement.

LYONDELLBASELL INDUSTRIES N.V.

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Note: For Mr. Rhenman, our Executive Vice President, Intermediates and Derivatives, and Refining, "Retirement" also includes an executive's voluntarily initiated termination of service on or after age 65.

LYONDELLBASELL INDUSTRIES
2021 NONQUALIFIED STOCK OPTION AWARD AGREEMENT

By letter (the "Grant Letter"), effective as of the date specified in the Grant Letter (the "Grant Date"), LyondellBasell Industries N.V. (the "Company"), pursuant to the LyondellBasell Industries Long-Term Incentive Plan, as amended and restated effective May 31, 2019 (the "Plan"), has granted to the Participant a right (the "Option") to purchase from the Company up to but not exceeding in the aggregate the number of shares of Common Stock (as defined in the Plan) (the "Option Shares") specified in the Grant Letter at the Grant Price per Option Share specified in the Grant Letter, such number of shares and such price per share being subject to adjustment as provided in the Plan, and further subject to the following terms and conditions (the "Award Agreement"):

1. Relationship to Plan and Company Agreements.

This Option is intended to be a nonqualified stock option within the meaning of Section 83 of the Code. This Option is subject to all of the Plan terms, conditions, provisions and administrative interpretations, if any, adopted by the Committee. Except as defined in this Award Agreement, capitalized terms have the same meanings ascribed to them in the Plan. To the extent that this Award Agreement is intended to satisfy the Company's obligations under any employment agreement between the Company and the Participant, the Participant agrees and acknowledges that this Award Agreement fulfills the Company's obligations under the employment agreement, this Award Agreement shall be interpreted and construed to the fullest extent possible consistent with such employment agreement, and in the event of a conflict between the terms of such employment agreement and the terms of this Award Agreement, the terms of this Award Agreement shall control.

2. Exercise Schedule.

(a) This Option shall become exercisable in three cumulative installments, with one-third of the Option Shares becoming exercisable on the first anniversary of the Grant Date, an additional one-third of the Option Shares becoming exercisable on the second anniversary of the Grant Date, and the final one-third of the Option Shares becoming exercisable on the third anniversary of the Grant Date. Except as provided below, the Participant must be in continuous employment from the Grant Date through the date of exercisability of each installment in order for the Option to become exercisable with respect to additional shares of Common Stock on such date.

(b) This Option shall become fully exercisable, irrespective of the limitations set forth in subparagraph (a) above, provided that the Participant has been in continuous employment since the Grant Date, upon (1) an involuntary termination of employment by the Company without Cause or a constructive termination of employment by the Participant with good reason as defined in Section 10 of the Plan (a "Constructive Termination"), either of which occurs within one year after the occurrence of a Change of Control or (2) any termination of employment due to death or Disability.

(c) Notwithstanding paragraph (a), this Option shall become fully exercisable, to the extent not previously vested, in accordance with paragraph (a) if Participant terminates employment due to Enhanced Retirement.

(d) Notwithstanding paragraph (a), provided that the Participant has been in continuous employment since the Grant Date, upon termination of employment due to Retirement or involuntary termination not for Cause, to the extent not previously vested pursuant to subparagraph (a) above, each third of the Option Shares described in subparagraph (a) above that are unvested as of the date of termination of employment shall become exercisable in a pro rata amount determined by a fraction with respect to each such unvested third of the Option Shares, the numerator of which shall be the number of months (with any partial months being considered a full month) of the Participant's employment from the Grant Date through the date of the Participant's termination of employment, and the denominator of which shall be the number of months for the period beginning on the Grant Date and ending on the corresponding anniversary date on which each such unvested third of the Option Shares would have vested pursuant to subparagraph (a) above. If the Participant is eligible for Enhanced Retirement, this paragraph (d) shall not apply and paragraph (c) shall control, unless the Participant affirmatively elects to decline Enhanced Retirement and accept pro rata vesting of the Option Shares under this paragraph, in which case Section 14 shall not apply.

(e) For purposes of this Award Agreement, the following definitions apply:

(i) "Disability" means a permanent and total disability as defined in the Company's long-term disability plan in which the Participant is eligible to participate.

(ii) "Enhanced Retirement" means a Participant's voluntarily initiated termination of service on or after age 60 with 10 years of service with the Company and/or an Affiliate.

(iii) "Misconduct" means any act or failure to act that (i) contributes to the Company having to restate all or a portion of its financial statements and materially increases the value of the compensation received by the Participant and/or (ii) caused or was intended to cause a violation of the policies of the Company or Affiliate.

(iv) "Retirement" means a Participant's voluntarily initiated termination of service on or after the earliest of (i) age 55 with 10 years of service with the Company and/or an Affiliate, (ii) the time of retirement as defined in a written agreement between a Participant and a Participating Employer, or (iii) outside the U.S., the time when retirement is permitted and the Participant is eligible to receive a company retirement benefit under applicable law with respect to the Participant's primary place of employment (as determined by the Committee in its sole judgment).

3. Termination of Option. The Option hereby granted shall terminate and be of no force and effect with respect to any shares of Common Stock not previously purchased by the Participant upon the first to occur of:

(a) the close of business on the date that is ten years from the Grant Date;

(b) with respect to

(i) the portion of the Option exercisable or which becomes exercisable upon termination of employment due to Enhanced Retirement, the close of business on the date that is ten years from the Grant Date;

(ii) the portion of the Option exercisable upon termination of employment (or which becomes exercisable upon termination due to death, Disability, Retirement, involuntary termination not for Cause or Constructive Termination), the expiration of (A) 90 days following the Participant's voluntary termination of employment, involuntary termination of employment not for Cause or Constructive Termination, and not due to death, Disability, Enhanced Retirement or Retirement, (B) one year following the Participant's termination of employment by reason of death or Disability; and (C) five years following the Participant's termination of employment by reason of Retirement.

(iii) the portion of the Option not exercisable upon termination of employment, the date of the Participant's termination of employment; or

(c) the date of the Participant's termination of employment for any reason other than those described in (b) above.

4. Exercise of Option. Subject to the limitations set forth herein and in the Plan, all or part of this Option may be exercised in accordance with procedures established by the Committee or its delegate and communicated to the Participant. At the time of exercise, the Participant must pay the full amount of the purchase price for any shares of Common Stock being acquired or, at the option of the Committee or its delegate, tender Common Stock theretofore owned by such Participant that is equal in value to the full amount of the purchase price (or any combination of cash payment and tender of Common Stock) or in any other manner approved by the Committee or its delegate. For purposes of determining the amount, if any, of the purchase price satisfied by payment in Common Stock, such Common Stock shall be valued at its Fair Market Value on the date of exercise. Any Common Stock delivered in satisfaction of all or a portion of the purchase price shall be appropriately endorsed for transfer and assignment to the Company.

The Participant will not be entitled to exercise the Option granted pursuant hereto, and the Company will not be obligated to issue any Option Shares pursuant to this Award Agreement, if the exercise of the Option or the issuance of such shares would constitute a violation by the Participant or by the Company of any provision of any law or regulation of any governmental authority or any stock exchange or transaction quotation system.

If any law or regulation requires the Company to take any action with respect to the shares specified in such notice, the time for delivery thereof, which would otherwise be as promptly as possible, shall be postponed for the period of time necessary to take such action.

5. Notices. Any notices required under this Award Agreement or the Plan shall be given in writing, including electronic communication, and shall be deemed effectively delivered or given upon receipt or, in the case of notices delivered by the Company to the Participant, five days after deposit in the mail or delivery to an overnight delivery service, postage prepaid, addressed to the Participant at the address last designated by the Participant by written notice to the Company.

6. Assignment of Option. The Participant's rights under the Plan and this Award Agreement are personal. No assignment or transfer of the Participant's rights under and interest in this Option may be made by the Participant otherwise than by will or by the laws of descent and distribution. This Option is exercisable during his lifetime only by the Participant, or, in the case of a Participant who is mentally incapacitated, this Option shall be exercisable by his guardian or legal representative. After the death of the Participant, exercise of the Option shall be permitted only by the Participant's executor or the personal representative of the Participant's estate (or by his assignee, in the event of a permitted assignment) and only to the extent that the Option was exercisable on the date of the Participant's death.

7. Withholding. The Company shall withhold from any delivery of shares of Common Stock under this Option, shares having a Fair Market Value equal to all taxes required to be withheld with respect to the Option. In the event all federal, state and other governmental withholding tax requirements imposed upon the Company with respect to the Option cannot be satisfied in this manner, no shares of Common Stock shall be delivered to or for a Participant unless provision to pay required withholding has been made to the Committee's satisfaction.

8. Expatriate Participants. Exercises by expatriate Participants will be, pursuant to the applicable expatriate assignment policy of the Participating Employer, tax normalized based on typical income taxes and social security taxes in the expatriate Participant's home country relevant to the expatriate Participant's domestic circumstances.

9. No Fractional Shares. No fractional shares of Common Stock are permitted in connection with this Award Agreement. For purposes of vesting in Section 2(a), Option Shares vesting on the second anniversary of the Grant Date shall be increased by any fractional shares resulting from the vesting schedule with respect to subsequent vesting dates and Option Shares vesting thereafter shall be rounded down to the nearest whole share. For purposes of pro-ration in Section 2(d), Option Shares shall be rounded up to the nearest whole share of Common Stock. Only whole Option Shares are exercisable pursuant to Section 4, and only whole shares of Common Stock may be delivered in satisfaction of the Grant Price. Any shares of Common Stock withheld pursuant to Section 7 shall be rounded to whole shares in the manner determined by the Committee to be appropriate to satisfy the minimum statutory withholding requirements.

10. Shareholder Rights. The Participant shall have no rights of a shareholder with respect to shares of Common Stock subject to the Option unless and until such time as the Option has been exercised and ownership of such shares of Common Stock has been transferred to the Participant.

11. Successors and Assigns. This Award Agreement shall bind and inure to the benefit of and be enforceable by the Participant, the Company and their respective permitted successors and assigns (including personal representatives, heirs and legatees), but the Participant may not assign any rights or obligations under this Award Agreement except to the extent and in the manner expressly permitted.

12. No Guaranteed Employment. No provision of this Award Agreement shall confer any right upon the Participant to continued employment.

13. Restrictive Covenants.

(a) This Section 13 shall apply solely if the Participant is eligible for Enhanced Retirement and the Option becomes exercisable under Section 2(c).

(b) Acknowledgment of Access to Confidential Information and Trade Secrets. Participant agrees and acknowledges that during employment with the Company, Participant will be provided with, develop, and will use confidential and proprietary information and trade secrets of the Company. The confidential and proprietary information and trade secrets include, but are not limited to, the Company's business strategies, non-public financial information, identities of clients and suppliers, pricing and margin information, and any other information that Participant receives as a result of employment with the Company and that provides the Company with an economic benefit from being confidential, whether in written, tangible, electronic or any other form or media (collectively, "Confidential Information"). Confidential Information does not apply to such information which is known to the public so long as such knowledge does not result from a breach of any provision of this Award Agreement by Participant.

(c) Protection of Company Confidential Information and Trade Secrets. Except as expressly authorized by the Company or in order to carry out the duties and responsibilities as an employee for the Company, Participant will not disclose, directly or indirectly, in any way to anyone the Company's Confidential Information or improperly make use of Confidential Information both during employment with the Company and at any time after employment with the Company terminates. Pursuant to 18 U.S.C. USC § 1833(b), and as set forth fully therein, notice is hereby given that an individual shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that is made in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney, solely for the purpose of reporting or investigating a suspected violation of law; or is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. An individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the attorney of the individual and use the trade secret information in the court proceeding, if the individual files any document containing the trade secret under seal and does not disclose the trade secret, except pursuant to court order.

(d) Non-Competition. Participant agrees that for a period of twenty-four (24) months following the date Participant's employment with the Company ends, Participant shall not (i) perform any duties or responsibilities which are similar to those Participant performed on behalf of the Company in the twenty-four (24) months prior to termination of employment for any person or entity who offers services or products, or both, competitive to those offered by the Company at the time of termination of employment, or (ii) perform any duties or responsibilities for any person or entity whereby Participant uses (or may use) Confidential Information of the Company. This restriction shall apply in any geographic area in which the Company does business as of the date of termination of employment.

(e) Non-Interference of Company Relationships. Participant agrees that for a period of twenty-four (24) months following the date Participant's employment with the Company ends, Participant shall not, directly or indirectly, influence, induce, solicit or otherwise take action intended to disrupt, limit or interfere with any customer, supplier, or vendor relationship which Participant had responsibility for or learned Confidential Information about in the twenty-four (24) months preceding the termination of employment.

(f) Non-Solicitation of Employees. Participant agrees that for a period of twenty-four (24) months following the date Participant's employment with the Company ends, Participant shall not, directly or indirectly, influence, induce, solicit or otherwise take action intended to disrupt, limit or interfere with the relationship of the Company and any employee with whom Participant interacted or knew about through employment at the Company in the twenty-four (24) months preceding the termination of employment.

(g) Non-Disparagement. Participant agrees that Participant shall not at any time engage in any form of conduct, or make any statement or representation, either oral or written, that disparages, impugns or otherwise impairs the reputation, goodwill or interests of the Company, or any of its officers, directors, shareholders, representatives, and/or employees or agents in either the individual or representative capacities of any of the foregoing individuals (including, without limitation, the repetition or distribution of derogatory rumors, allegations, negative reports or comments). Nor shall Participant direct, arrange or encourage others to make any such derogatory or disparaging statements on Participant's behalf. Nothing in this paragraph, however, shall prevent Participant from providing truthful testimony or information in any proceeding or in response to any request from any governmental agency, or judicial, arbitral or self-regulatory forum, or as otherwise required by applicable law.

(h) Cooperation. Participant agrees to cooperate with the Company by making Participant reasonably available to testify on behalf of the Company in any action, suit, or proceeding, whether civil, criminal, administrative, or investigative, and to assist the Company in any such action, suit, or proceeding, by providing information and meeting and consulting with the Company and its employees, representatives and counsel.

(i) Irreparable Harm. Participant acknowledges that the Company has a legitimate need to protect itself from improper or unfair competition and to protect its Confidential Information, as well as the Company's relationships with its business partners and employees, and that the restrictions contained in this Award Agreement are reasonable and necessary to protect the Company's operations, legitimate competitive interests, and Confidential Information. Participant also recognizes the highly competitive nature of the Company's business and that irreparable harm would be caused by Participant's violation of the restrictions contained herein.

(j) Remedies. Participant agrees that the Company's remedies at law for any violation of this Award Agreement are inadequate and that the Company has the right to seek injunctive relief in addition to any other remedies available to it. Therefore, if Participant breaches or threatens to breach this Award Agreement, the Company is entitled to specific performance and injunctive relief, in addition to any other remedies, including but not limited to monetary damages, without the posting of a bond. Participant further agrees to pay any and all legal fees, including without limitation, all attorneys' fees, court costs, and any other related fees and/or costs incurred by the Company in enforcing this Award Agreement. Participant further agrees that a court may extend the duration of the restrictions in Section 13 of this Award Agreement equal to any period of time in which Participant is in violation of this Award Agreement.

14. Company Clawback Policy.

(a) If (i) the Committee determines that the Participant has either engaged in, or benefitted from, Misconduct and (ii) the Participant is classified at a level of M-4 or above in the LyondellBasell Group compensation classification system at the time of such determination, upon notice from the Company, the Participant shall reimburse to the Company all or a portion of any amounts (whether in cash or shares) received under this Award Agreement (or forfeit all or any portion of this Award to the extent it has not yet been received) as the Committee deems appropriate under the circumstances. Such notice shall be provided within the earlier to occur of one year after discovery of the alleged Misconduct or the second anniversary of the Participant's date of termination.

(b) If the Committee determines that the Participant has violated any of the obligations set forth in Section 13 of this Award Agreement, upon notice from the Company, the Participant shall reimburse to the Company all or a portion of any amounts (whether in cash or shares) received under this Award Agreement (or forfeit all or any portion of this Award to the extent it has not yet been received) as the Committee deems appropriate under the circumstances. Such notice shall be provided within the earlier to occur of one year after discovery of the alleged violation or the second anniversary of the Participant's Date of Termination.

15. Choice of Law. This Award Agreement shall be governed by the laws of the State of Texas, without regard to conflict of laws principles.

16. Jurisdiction and Forum. Any action arising out of this Award Agreement or the relationship between the parties established herein shall be brought only in the state or federal courts of the State of Texas, and Participant hereby consents to and submits to the exclusive jurisdiction of such courts.

17. Savings Clause. It is expressly understood and agreed that although the Company and Participant consider the restrictions contained in Section 13 of this Award Agreement to be reasonable for the purpose of preserving the Company's Confidential Information, as well as the Company's relationships with its business partners and employees, if any restrictive covenant set forth in Section 13 of this Award Agreement is found by any court having jurisdiction to be invalid or unreasonable, the restrictive covenant shall be limited and reduced so as to contain the maximum restrictions permitted by applicable law. The restrictive covenants set forth in Section 13 of this Award Agreement shall be interpreted consistent with, and limited to the extent necessary to comply with, applicable rules of professional conduct. All remaining provisions of this Award Agreement, and/or portions thereof, shall remain in full force and effect.

18. Waiver. The Company's failure to enforce any provision(s) of this Award Agreement shall not in any way be construed as a waiver of any such provision(s), or prevent the Company thereafter from enforcing each and every other provision of this Award Agreement.

LYONDELLBASELL INDUSTRIES N.V.

Note: For Mr. Rhenman, our Executive Vice President, Intermediates and Derivatives, and Refining, "Retirement" also includes an executive's voluntarily initiated termination of service on or after age 65.

Subsidiary Issuers of Guaranteed Securities

The wholly owned finance subsidiaries of LyondellBasell Industries N.V. (the "Company") identified in the table below have issued the securities listed opposite each such subsidiary issuer in the table below. The Company has fully and unconditionally guaranteed all such securities:

Subsidiary Issuer	Guaranteed Securities
LYB International Finance B.V., a 100% owned finance subsidiary	4.000% Guaranteed Notes due 2023; 5.250% Guaranteed Notes due 2043; 4.875% Guaranteed Notes due 2044
LYB International Finance II B.V., a 100% owned finance subsidiary	0.875% Guaranteed Notes due 2026; 3.500% Guaranteed Notes due 2027; 1.625% Guaranteed Notes due 2031
LYB International Finance III LLC, a 100% owned finance subsidiary	Guaranteed Floating Rate Notes due 2023; 1.125% Guaranteed Notes due 2025; 2.875% Guaranteed Notes due 2025; 3.375% Guaranteed Notes due 2030; 2.250% Guaranteed Notes due 2030; 3.375% Guaranteed Notes due 2040; 4.200% Guaranteed Notes due 2049; 4.200% Guaranteed Notes due 2050; 3.625% Guaranteed Notes due 2051; 3.800% Guaranteed Notes due 2060

Exhibit 31.1

CERTIFICATION

I, Bhavesh V. Patel, 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.

April 30, 2021

/s/ Bhavesh V. Patel
Bhavesh V. Patel
Chief Executive Officer
(*Principal Executive Officer*)

Exhibit 31.2

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.

April 30, 2021

/s/Michael C. McMurray
Michael C. McMurray
Executive Vice President and
Chief Financial Officer
(Principal Financial and Accounting 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 March 31, 2021, 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.

April 30, 2021

/s/Bhavesh V. Patel
Bhavesh V. Patel
Chief Executive Officer
(Principal Executive Officer)

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