DEUTSCHE BANK GLOBAL INDUSTRIALS, MATERIALS & BUILDING PRODUCTS CONFERENCE

June 8, 2023

Michael McMurray

Chief Financial Officer

CAUTIONARY STATEMENT

The statements in this presentation relating to matters that are not historical facts are forward-looking statements. These forward-looking statements are based upon assumptions of management of LyondellBasell which are believed to be reasonable at the time made and are subject to significant risks and uncertainties. When used in this presentation, the words “estimate,” “believe,” “continue,” “could,” “intend,” “may,” “plan,” “potential,” “predict,” “should,” “will,” “expect,” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain such identifying words. Actual results could differ materially based on factors including, but not limited to, market conditions, the business cyclicality of the chemical, polymers and refining industries; the availability, cost and price volatility of raw materials and utilities, particularly the cost of oil, natural gas, and associated natural gas liquids; our ability to successfully implement initiatives identified pursuant to our value enhancement program and generate anticipated earnings; competitive product and pricing pressures; labor conditions; our ability to attract and retain key personnel; operating interruptions (including leaks, explosions, fires, weather-related incidents, mechanical failure, unscheduled downtime, supplier disruptions, labor shortages, strikes, work stoppages or other labor difficulties, transportation interruptions, spills and releases and other environmental risks); the supply/demand balances for our and our joint ventures’ products, and the related effects of industry production capacities and operating rates; our ability to manage costs; future financial and operating results; benefits and synergies of any proposed transactions and our ability to align our assets with our core; legal and environmental proceedings; tax rulings, consequences or proceedings; technological developments, and our ability to develop new products and process technologies; our ability to meet our sustainability goals, including the ability to operate safely, increase production of recycled and renewable-based polymers to meet our targets and forecasts, and reduce our emissions and achieve net zero emissions by the time set in our goals; our ability to procure energy from renewable sources; our ability to build a profitable Circular & Low Carbon Solutions business; the successful shut down and closure of the Houston Refinery, including within the expected timeframe; our ability to successfully implement initiatives identified pursuant to our value enhancement program and generate anticipated earnings; potential governmental regulatory actions; political unrest and terrorist acts; risks and uncertainties posed by international operations, including foreign currency fluctuations; and our ability to comply with debt covenants and to repay our debt. Additional factors that could cause results to differ materially from those described in the forward-looking statements can be found in the “Risk Factors” section of our Form 10-K for the year ended December 31, 2022, which can be found at www.LyondellBasell.com on the Investor Relations page and on the Securities and Exchange Commission’s website at www.sec.gov. There is no assurance that any of the actions, events or results of the forward-looking statements will occur, or if any of them do, what impact they will have on our results of operations or financial condition. Forward-looking statements speak only as of the date they were made and are based on the estimates and opinions of management of LyondellBasell at the time the statements are made. LyondellBasell does not assume any obligation to update forward-looking statements should circumstances or management’s estimates or opinions change, except as required by law.

This presentation contains time sensitive information that is accurate only as of the date hereof. Information contained in this release is unaudited and is subject to change. We undertake no obligation to update the information presented herein except as required by law.

See APPENDIX for a discussion of the Company’s use of non-GAAP financial measures and reconciliations of these measures to the nearest comparable GAAP measures.

PERFORMANCE SNAPSHOT

RESILIENT PORTFOLIO DELIVERING VALUE IN DYNAMIC MARKETS

$3.0 B

NET INCOME
1Q23 LTM

$6.0 B

EBITDA
ex. Identified Items
1Q23 LTM

$5.8 B

LIQUIDITY
MARCH 31, 2023

12%

RETURN ON
INVESTED CAPITAL
1Q23 LTM

REPORTING SEGMENTS

1Q23 LTM

	EBITDA	EBITDA ex. Identified Items
Olefins & Polyolefins – Americas	$2,467 MM	$2,467 MM
Olefins & Polyolefins – EAI	$41 MM	$110 MM
Intermediates & Derivatives	$1,752 MM	$1,752 MM
Advanced Polymer Solutions	$(182) MM	$70 MM
Refining	$1,019 MM	$1,245 MM
Technology	$336 MM	$336 MM

Notes: Identified items include adjustments for lower of cost or market ("LCM"), impairments and refinery exit costs. Return on invested capital means income from continuing operations divided by two-year average of invested capital. We previously calculated return on invested capital as income from continuing operations, adjusted for interest expense, net of tax and items affecting comparability between periods divided by a two-year average of invested capital adjusted for items affecting comparability. The change was made to streamline reporting around this metric.

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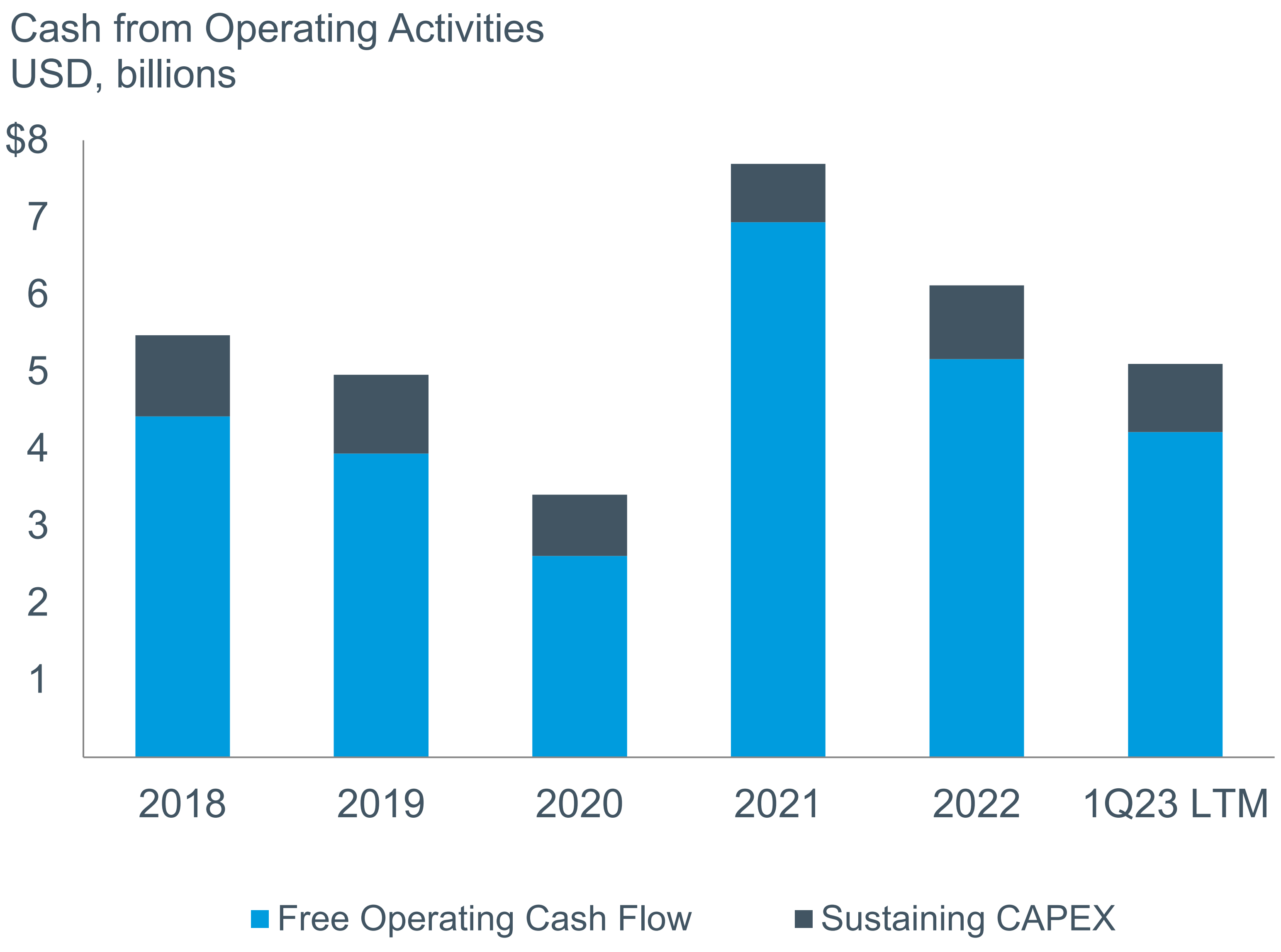
EXCELLENT CASH GENERATION

OUTSTANDING CASH GENERATION SUPPORTING STRONG BALANCE SHEET AND SHAREHOLDER RETURNS



$5.1 B CASH FROM OPERATING ACTIVITIES
1Q23 LTM

$1.8 B CASH AND CASH EQUIVALENTS
Balance as of March 31, 2023

1.7x NET DEBT TO EBITDA
March 31, 2023

89% CASH CONVERSION
1Q23 LTM

$3.5 B RETURNED TO SHAREHOLDERS IN DIVIDENDS AND SHARE REPURCHASES
1Q23 LTM

Note: Free operating cash flow is cash from operating activities minus sustaining (maintenance and HSE) capital expenditures. Net debt to EBITDA is total debt, net of cash and cash equivalents, restricted cash and short-term investments divided by EBITDA excluding LCM and impairment. Cash conversion equals net cash provided by operating activities divided by EBITDA excluding LCM and impairment.

NEW STRATEGY DRIVING FOCUS, DIFFERENTIAL GROWTH AND VALUE CREATION

POSITIONING LYONDELLBASELL TO DELIVER SUSTAINABLE AND PROFITABLE LONG-TERM GROWTH

Grow & Upgrade the Core	**Shaping our portfolio to leverage strengths, support growth, increase resiliency and drive higher returns**	**$1.8 B** Incremental Normalized EBITDA[1] by 2027
Build a Profitable Circular & Low Carbon Solutions Business	**Building a leading CLCS business at scale to meet current and growing future demand for sustainable solutions**	**$0.5 B** Incremental Normalized EBITDA[1] by 2027
Step Up Performance & Culture	**Unlocking significant opportunities across the portfolio by reshaping culture to focus on continuous value creation**	**$0.7 B** Incremental Normalized EBITDA[1] by 2027

1. 2027 incremental Normalized EBITDA reflects expected improvement over a 2022 year-end asset portfolio with 2013-2022 historical average margins and operating rates. Please see Appendix for additional information on Normalized EBITDA.

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GROWING AND UPGRADING THE CORE

DISTILLING AND BUILDING ON GREATEST LEGACY STRENGTHS TO DEFINE OUR FUTURE CORE

Strategic Criteria to Define Core Assets

1. **Leading** market positions
2. **Growing** end markets
3. **Attractive returns** above our cost of capital
4. Access to **advantaged feedstocks** and, increasingly, **circular and renewable feedstocks**
5. Strategic focus on **Circular & Low Carbon Solutions**

EXAMPLES

- **Louisiana Integrated Polyethylene JV**
- **New PO/TBA capacity**
- **New plastic waste sorting and recycling facilities**
- **Planning exit of refining business**
- **Strategic review of ethylene oxide & derivatives business**

LYONDELLBASELL'S CIRCULAR AND LOW CARBON SOLUTIONS

PRIMED FOR LONG-TERM PROFITABLE GROWTH, EXPECTED TO CAPTURE AT LEAST $1 B IN INCREMENTAL EBITDA[1] BY 2030

$25 B+

Total addressable market[2,3]

20%+

Market share for LyondellBasell[3]

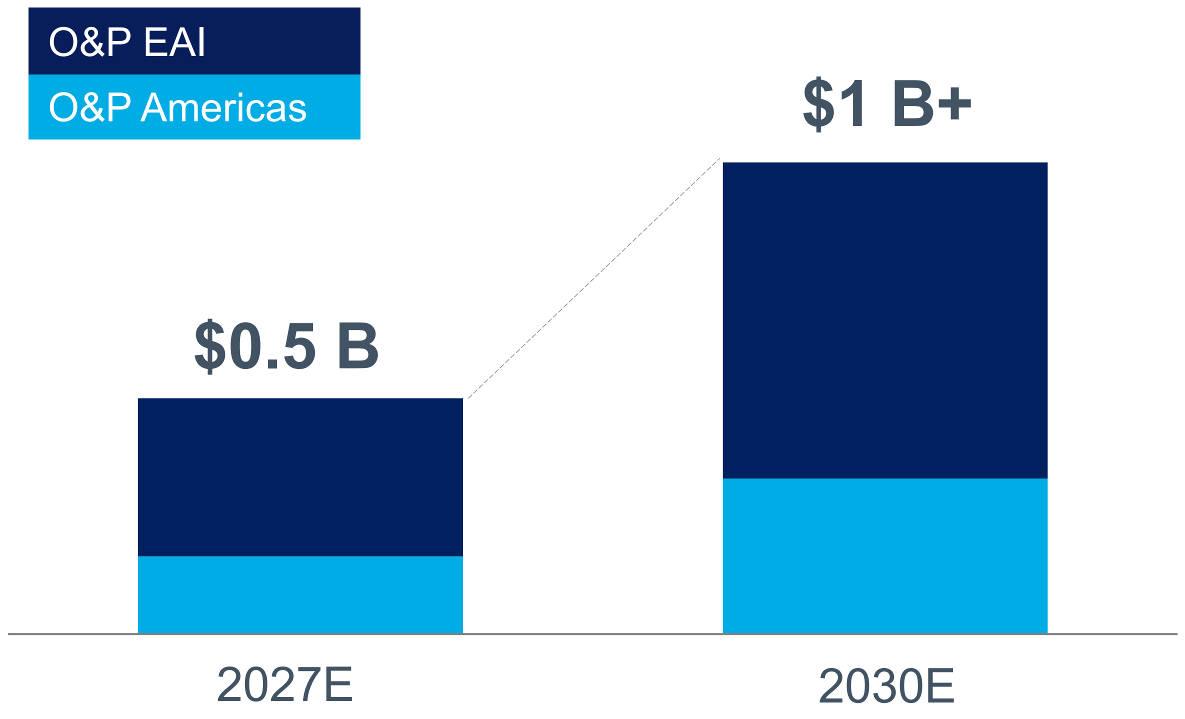
2 MM+ Tons

Recycled and renewable-based polymers produced and marketed by LyondellBasell

Annually by 2030

GROWTH TARGETS

(USD, billions)



Relatively low capital intensity: ~15% of our expected capital investment from 2023 – 2030

OUR UNIQUE SUCCESS FACTORS

1. **Access to large customers** and brand owners
2. Ability to **leverage** existing asset base
3. **Innovative and differentiated technologies** (e.g., *MoReTec*)
4. **Differentiated operating model** resourced for success
5. **Access to plastic waste** through strategic partnerships and footprint in strategic locations

1. EBITDA is incremental to LyondellBasell's fossil-based O&P Americas and O&P EAI annual EBITDA. Please see Appendix for additional information on CLCS EBITDA.
2. Sources: McKinsey Chemical Insights, IHS Markit and LyondellBasell.
3. In North America and Europe.

CULTURE SHIFT TO UNLOCK VALUE AT SCALE, NOW AND INTO THE FUTURE

VALUE ENHANCEMENT PROGRAM IDENTIFIED

$750 MM

RECURRING ANNUAL EBITDA[1]

by the end of 2025

CONTINUOUS PROCESS EMBEDDED IN OUR MINDSET

- ✓ Maintaining best-in-class operations while we shift corporate focus to value enhancement
- ✓ Igniting new energy within employees to find value enhancing opportunities
- ✓ Pursuing initiatives that will drive long-term value
- × Not simple one-time cost savings
- × Not seeking to defer needed maintenance
- × Not aiming for broad headcount reductions

1. EBITDA is estimated based on 2017-2019 mid-cycle margins and modest inflation relative to 2021 baseline.

FINANCIAL PRINCIPLES

POLICIES, TARGETS AND ASSUMPTIONS UNDERPINNING OUR NEW STRATEGY

GROW & UPGRADE THE CORE	BUILD A PROFITABLE CIRCULAR & LOW CARBON SOLUTIONS BUSINESS	STEP UP PERFORMANCE & CULTURE

- Expect annual investments in capital expenditures to average $2 B from 2023-2025 and remain within historical ranges through 2027
- Targeting ~70% of free cash flow[1] to be allocated toward shareholder returns
- Plan to extend our 12-year track record of annual growth for our regular dividend
- Expect to continue converting ~80%[2] of EBITDA into cash from operating activities
- Seek to maintain minimum of $1 B to $1.5 B in cash and short-term investments
- Target net debt to EBITDA[3] ratios below 2.5x to support our investment grade credit ratings
- Anticipate additional share repurchases and potential special dividends through 2027

1. Free cash flow is net cash provided by operating activities minus capital expenditures.
2. Cash conversion equals net cash provided by operating activities divided by EBITDA excluding LCM and impairment. Cash conversion rate is a target based on average 2013-2022 cash conversion.
3. Net debt to EBITDA is total debt, net of cash and cash equivalents, restricted cash and short-term investments divided by EBITDA excluding LCM and impairment.

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PRIMED TO GROW AND IMPROVE, GUIDED BY OUR FOCUSED STRATEGY

CONTINUED DELIVERY OF FREE CASH FLOW AND INVESTOR RETURNS WHILE GROWING AND UPGRADING THE PORTFOLIO

	2022	2025 Normalized EBITDA[1]	2027 Normalized EBITDA[1]
EBITDA	$6.3 B	$9 B	$10 B
Cash Conversion[2]	96%	80%	80%
Diluted EPS[3]	$11.81	$19	$23

CREATING A FOCUSED PORTFOLIO POISED TO GENERATE HIGHER RETURNS

- Build on lasting competitive advantages
- Focus on areas where we have leadership positions
- Cement our position as our customer's preferred supplier
- Establish a profitable and rapidly growing leadership position in Circular & Low Carbon Solutions

1. 2025 and 2027 Normalized EBITDA reflects a 2022 year-end asset portfolio with 2013-2022 historical average margins and operating rates and the Company's strategic initiatives. Please see Appendix for additional information on Normalized EBITDA.
2. 2022 cash conversion equals net cash provided by operating activities divided by EBITDA excluding LCM and impairment. 2025 and 2027 cash conversion rates are targets based on average 2013-2022 cash conversion.
3. 2025 and 2027 diluted EPS are derived from estimated net income assuming a 20% tax rate and 70% of free cash flow allocated to share repurchases and a progressively growing quarterly dividend. Free cash flow is net cash provided by operating activities minus capital expenditures.

APPENDIX

INFORMATION RELATED TO FINANCIAL MEASURES

This presentation makes reference to certain “non GAAP” financial measures as defined in Regulation G of the U S Securities Exchange Act of 1934 as amended.

We report our financial results in accordance with U.S. generally accepted accounting principles, but believe that certain non-GAAP financial measures, such as EBITDA, and EBITDA exclusive of identified items provide useful supplemental information to investors regarding the underlying business trends and performance of the company's ongoing operations and are useful for period-over-period comparisons of such operations. Non-GAAP financial measures should be considered as a supplement to, and not as a substitute for, or superior to, the financial measures prepared in accordance with GAAP. We calculate EBITDA as income from continuing operations plus interest expense (net), provision for (benefit from) income taxes, and depreciation and amortization. We also present EBITDA exclusive of identified items. Identified items include adjustments for “lower of cost or market" (“LCM”), impairment and refinery exit costs. LCM is an accounting rule consistent with GAAP related to the valuation of inventory. Our inventories are stated at the lower of cost or market. 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. Fluctuation 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 lower of cost or market in periods of falling prices and the reversal of those charges in subsequent interim periods, within the same fiscal year as the charge, as market prices recover. Property, plant and equipment are recorded at historical costs. If it is determined that an asset or asset group’s undiscounted future cash flows will not be sufficient to recover the carrying amount, an impairment charge is recognized to write the asset down to its estimated fair value. Goodwill is tested for impairment annually in the fourth quarter or whenever events or changes in circumstances indicate that the fair value of a reporting unit with goodwill is below its carrying amount. If it is determined that the carrying value of the reporting unit including goodwill exceeds its fair value, an impairment charge is recognized. In April 2022 we announced our decision to cease operation of our Houston Refinery. In connection with exiting the refinery business, we began to incur costs primarily consisting of accelerated lease amortization costs, personnel related costs, accretion of asset retirement obligations and depreciation of asset retirement cost.

Normalized EBITDA is EBITDA assuming portfolio normalizations including benefits associated with the following strategic initiatives: Grow & Upgrade the Core, Building a Profitable Circular & Low Carbon Solutions (“CLCS”) Business and Step Up Performance & Culture. Portfolio normalizations reflect a 2022 year end asset portfolio with 2013-2022 historical average margins and operating rates.

Incremental normalized EBITDA and incremental normalized EBITDA related to CLCS cannot be reconciled to net income due to the inherent difficulty in quantifying certain amounts that are necessary for such reconciliation at the strategic initiative and business unit level, including adjustments that could be made for interest expense (net), provision for (benefit from) income taxes and depreciation & amortization, the amounts of which, based on historical experience, could be significant.

Free operating cash flow, net debt to EBITDA and cash conversion are measures commonly used by investors to evaluate liquidity. For purposes of this presentation, free operating cash flow means net cash provided by operating activities minus sustaining (maintenance and health, safety and environment) capital expenditures. Net debt to EBITDA means total debt minus cash and cash equivalents, restricted cash and short-term investments divided by EBITDA excluding LCM and impairment. Cash conversion means net cash provided by operating activities divided by EBITDA excluding LCM and impairment.

These measures as presented herein, may not be comparable to similarly titled measures reported by other companies due to differences in the way the measures are calculated.

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Reconciliation of Net Income to EBITDA Including and Excluding Identified Items

Millions of dollars	Year Ended December 31, 2022	Three Months Ended March 31, 2022	Three Months Ended March 31, 2023	Last Twelve Months March 31, 2023
Net income	$ 3,889	$ 1,320	$ 474	$ 3,043
Loss from discontinued operations, net of tax	5	1	1	5
Income from continuing operations	3,894	1,321	475	3,048
Provision for income taxes	882	316	167	733
Depreciation and amortization [(a)]	1,267	311	396	1,352
Interest expense, net	258	72	93	279
add: Identified items				
Impairments [(b)]	69	-	252	321
Refinery exit costs [(c)]	157	-	69	226
EBITDA excluding identified items	6,527	2,020	1,452	5,959
less: Identified items				
Impairments [(b)]	(69)	-	(252)	(321)
Refinery exit costs [(c)]	(157)	-	(69)	(226)
EBITDA	$ 6,301	$ 2,020	$ 1,131	$ 5,412

(a) Depreciation and amortization includes depreciation of asset retirement costs of $30 million and $55 million, expensed during the year ended December 31, 2022 and the three months ended March 31, 2023, respectively, in connection w ith exiting the Refining business.

(b) The year ended December 31, 2022 reflects impairment charges related to the sale of our polypropylene manufacturing facility in Australia. The first quarter of 2023 reflects a non-cash goodw ill impairment charge in our Advanced Polymers Solutions segment.

(c) Refinery exit costs, include accelerated lease amortization costs of $91 million and $51 million, personnel related costs of $64 million and $16 million, and accretion of asset retirement obligations of $2 million and $2 million, during the year ended December 31, 2022 and the three months ended March 31, 2023, respectively.

Note: Last tw elve months March 31, 2023 is calculated as year ended December 31, 2022 plus three months ended March 31, 2023, minus three months ended March 31, 2022.

Reconciliation of EBITDA to EBITDA Excluding Identified Items by Segment (unaudited)

Millions of dollars	Year Ended December 31, 2022	Three Months Ended March 31, 2022	Three Months Ended March 31, 2023	Last Twelve Months March 31, 2023
EBITDA:				
Olefins & Polyolefins - Americas	$ 2,865	$ 939	$ 541	$ 2,467
Olefins & Polyolefins - EAI	178	214	77	41
Intermediates & Derivatives	1,872	546	426	1,752
Advanced Polymer Solutions	115	71	(226)	(182)
Refining	921	148	246	1,019
Technology	366	103	73	336
Other	(16)	(1)	(6)	(21)
EBITDA	$ 6,301	$ 2,020	$ 1,131	$ 5,412
Add: Identified items				
Impairments:				
Olefins & Polyolefins - EAI	$ 69	$ -	$ -	$ 69
Advanced Polymer Solutions	-	-	252	252
Refinery exit costs:				
Refining	157	-	69	226
Total Identified items	$ 226	$ -	$ 321	$ 547
EBITDA excluding Identified items:				
Olefins & Polyolefins - Americas	$ 2,865	$ 939	$ 541	$ 2,467
Olefins & Polyolefins - EAI	247	214	77	110
Intermediates & Derivatives	1,872	546	426	1,752
Advanced Polymer Solutions	115	71	26	70
Refining	1,078	148	315	1,245
Technology	366	103	73	336
Other	(16)	(1)	(6)	(21)
EBITDA excluding Identified items	$ 6,527	$ 2,020	$ 1,452	$ 5,959

Note: Effective January 1, 2023, our Catalloy and polybutene-1 products were moved from the Advanced Polymer Solutions segment and reintegrated into the Olefins and Polyolefins-Americas and Olefins and Polyolefins-Europe, Asia, International segments. The segment information presented above gives effect to this change for all periods presented. Last twelve months March 31, 2023 is calculated as year ended December 31, 2022 plus three months ended March 31, 2023, minus three months ended March 31, 2022.

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Components of Cash and Liquid Investments and Total Liquidity

Millions of dollars	March 31, 2023
Cash and cash equivalents and restricted cash	$ 1,804
Short-term investments	-
Cash and liquid investments	$ 1,804
Availability under Senior Revolving Credit Facility	3,050
Availability under U.S. Receivables Facility	900
Total liquidity	$ 5,754

Return on Invested Capital

		Three Months Ended				Last Twelve Months
Millions of Dollars	March 31, 2022	June 30, 2022	September 30, 2022	December 31, 2022	March 31, 2023	March 31, 2023
Income from continuing operations		$ 1,645	$ 573	$ 355	$ 475	$ 3,048
Divided by:						
Average invested capital						
Shareholders' equity	$ 12,698				$ 12,721	
Long-term debt	11,175				10,601	
Long-term operating lease liabilities	1,610				1,507	
Current operating lease liabilities	334				350	
Current debt:						
Current maturities of long-term debt	8				432	
Short-term debt	141				343	
Invested capital	$ 25,966				$ 25,954	
2-Yr average invested capital						$ 25,960
Return on average invested capital [(a)]						12 %

(a) Effective beginning the first quarter of 2023, w e revised our calculation of return on invested capital. Return on invested capital is income from continuing operations divided by a tw o-year average of invested capital. We previously calculated Return on invested capital as income from continuing operations, adjusted for interest expense, net of tax and items affecting comparability betw een periods divided by a tw o-year average of invested capital adjusted for items affecting comparability. The change w as made to streamline reporting around this metric.

Note: Last tw elve months March 31, 2023 is calculated as the sum of the quarters ended June 30, 2022, September 30, 2022, December 31, 2022 and March 31, 2023.

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Reconciliation of Net Cash Provided by Operating Activities for Free Operating Cash Flow

Millions of dollars	Year Ended December 31, 2018	2019	2020	2021	2022	Three Months Ended March 31, 2022	March 31, 2023	Last Twelve Months March 31, 2023
Net cash provided by operating activities	$ 5,471	$ 4,961	$ 3,404	$ 7,695	$ 6,119	$ 1,502	$ 482	$ 5,099
Less:								
Sustaining (maintenance and HSE) capital expenditures	1,052	1,024	793	758	959	259	187	887
Free operating cash flow	$ 4,419	$ 3,937	$ 2,611	$ 6,937	$ 5,160	$ 1,243	$ 295	$ 4,212

Note: Last twelve months March 31, 2023 is calculated as year ended December 31, 2022 plus three months ended March 31, 2023, minus three months ended March 31, 2022.

Calculation of LTM Dividends and Share Repurchases

Millions of dollars	Year Ended December 31, 2022	Three Months Ended March 31, 2022	March 31, 2023	Last Twelve Months March 31, 2023
Dividends - common stock	$ 1,542	$ 371	$ 389	$ 1,560
Special dividends - common stock	1,704	-	-	1,704
Repurchases of Company ordinary shares	420	217	70	273
Dividends and share repurchases	$ 3,666	$ 588	$ 459	$ 3,537

Note: Last twelve months March 31, 2023 is calculated as year ended December 31, 2022 plus three months ended March 31, 2023, minus three months ended March 31, 2022.

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Reconciliation of Net Cash Provided by Operating Activities to EBITDA Including and Excluding LCM and Impairment

	Year Ended December 31,										Three Months Ended		Last Twelve Months
Millions of dollars	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	March 31, 2022	March 31, 2023	March 31, 2023
Net cash provided by operating activities	$ 4,835	$ 6,048	$ 5,842	$ 5,606	$ 5,206	$ 5,471	$ 4,961	$ 3,404	$ 7,695	$ 6,119	$ 1,502	$ 482	$ 5,099
Adjustments:													
Depreciation and amortization	(1,021)	(1,019)	(1,047)	(1,064)	(1,174)	(1,241)	(1,312)	(1,385)	(1,393)	(1,267)	(311)	(396)	(1,352)
Impairments [a]	—	—	—	—	—	—	—	(582)	(624)	(69)	—	(252)	(321)
Amortization of debt-related costs	(21)	(20)	(16)	(16)	(15)	(14)	(11)	(21)	(35)	(14)	(4)	(3)	(13)
Charges related to repayment of debt	—	—	—	—	(49)	—	—	—	—	—	—	—	—
Share-based compensation	—	—	(53)	(38)	(55)	(39)	(48)	(55)	(66)	(70)	(18)	(24)	(76)
Inventory valuation charges	—	(760)	(548)	(29)	—	—	(33)	(16)	—	—	—	—	—
Equity loss, net of distributions of earnings	17	101	54	(18)	12	(18)	(22)	97	146	(344)	(5)	(5)	(344)
Deferred income tax provision	46	(177)	(181)	(357)	587	(260)	(209)	(331)	198	(369)	(137)	(6)	(238)
Gain on sale of business and equity method investments	—	—	—	84	108	36	—	—	—	—	—	—	—
Changes in assets and liabilities that used (provided) cash:													
Accounts receivable	64	(358)	(780)	383	521	(433)	(367)	246	1,519	(1,005)	629	279	(1,355)
Inventories	151	205	240	(123)	237	141	129	(340)	742	91	117	319	293
Accounts payable	(275)	378	786	(383)	(165)	199	251	(217)	(1,301)	464	(724)	(40)	1,148
Other, net	57	(230)	177	(208)	(336)	848	58	627	(1,264)	353	271	120	202
Net income	3,853	4,168	4,474	3,837	4,877	4,690	3,397	1,427	5,617	3,889	1,320	474	3,043
Loss from discontinued operations, net of tax	7	4	5	10	18	8	7	2	6	5	1	1	5
Income from continuing operations	3,860	4,172	4,479	3,847	4,895	4,698	3,404	1,429	5,623	3,894	1,321	475	3,048
Provision for (benefit from) income taxes	1,136	1,540	1,730	1,386	598	613	648	(43)	1,163	882	316	167	733
Depreciation and amortization	1,021	1,019	1,047	1,064	1,174	1,241	1,312	1,385	1,393	1,267	311	396	1,352
Interest expense, net	294	319	277	305	467	315	328	514	510	258	72	93	279
add: LCM charges	—	760	548	29	—	—	33	16	—	—	—	—	—
add: Impairments [a]	—	—	—	—	—	—	—	582	624	69	—	252	321
EBITDA excluding LCM and impairment	6,311	7,810	8,081	6,631	7,134	6,867	5,725	3,883	9,313	6,370	2,020	1,383	5,733
less: LCM charges	—	(760)	(548)	(29)	—	—	(33)	(16)	—	—	—	—	—
less: Impairments [a]	—	—	—	—	—	—	—	(582)	(624)	(69)	—	(252)	(321)
EBITDA	$ 6,311	$ 7,050	$ 7,533	$ 6,602	$ 7,134	$ 6,867	$ 5,692	$ 3,285	$ 8,689	$ 6,301	$ 2,020	$ 1,131	$ 5,412

(a) Reflects impairment charges related to the sale of our polypropylene manufacturing facility in Australia, recognized in 2022 and a non-cash goodw ill impairment charge in our Advanced Polymers Solutions segment, recognized in the first quarter of 2023.

Note: Last tw elve months March 31, 2023 is calculated as year ended December 31, 2022 plus three months ended March 31, 2023, minus three months ended March 31, 2022.

Reconciliation of Total Debt to Net Debt and Calculation of LTM Net Debt to EBITDA excluding LCM and Impairment

Millions of dollars	March 31, 2023
Current maturities of long-term debt	$ 432
Short-term debt	343
Long-term debt	10,601
Total debt	11,376
Less:	
Cash and cash equivalents	1,790
Restricted cash	14
Short-term investments	-
Net debt	$ 9,572
Divided by:	
LTM EBITDA excluding LCM and impairment [(a)]	$ 5,733
LTM Net Debt to EBITDA excluding LCM and impairment [(a)]	1.7

(a) See Reconciliation of net cash provided by operating activities to EBITDA including and excluding LCM and impairment.

Calculation of LTM Cash Conversion

Millions of dollars	Year Ended December 31,										Three Months Ended		Last Twelve Months
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	March 31, 2022	March 31, 2023	March 31, 2023
Net cash provided by operating activities [(a)]	$ 4,835	$ 6,048	$ 5,842	$ 5,606	$ 5,206	$ 5,471	$ 4,961	$ 3,404	$ 7,695	$ 6,119	$ 1,502	$ 482	$ 5,099
Divided by:													
EBITDA excluding LCM and impairment [(a)]	$ 6,311	$ 7,810	$ 8,081	$ 6,631	$ 7,134	$ 6,867	$ 5,725	$ 3,883	$ 9,313	$ 6,370	$ 2,020	$ 1,383	$ 5,733
Cash conversion [(b)]	77 %	77 %	72 %	85 %	73 %	80 %	87 %	88 %	83 %	96 %	74 %	35 %	89 %
Average cash conversion [(c)]										81 %			

(a) See Reconciliation of net cash provided by operating activities to EBITDA including and excluding LCM and impairment.
(b) Cash conversion is the ratio of net cash provided by operating activities to EBITDA excluding LCM and impairment.
(c) Average cash conversion based on average 2013-2022 cash conversion.
Note: Last twelve months March 31, 2023 is calculated as year ended December 31, 2022 plus three months ended March 31, 2023, minus three months ended March 31, 2022.

Reconciliation Net Income to EBITDA for Value Enhancement Program

Millions of dollars	2025[(a)] Recurring Annual EBITDA
Net income	$ 575
Provision for income taxes	140
Depreciation and amortization	35
Interest expense, net	—
EBITDA	$ 750

(a) In 2022, we launched a value enhancement program targeting $750 million in recurring annual EBITDA by the end of 2025.

Reconciliation of Net Income to Normalized EBITDA

Millions of dollars	2025	2027
Net income	$ 5,550	$ 6,260
Provision for income taxes	1,390	1,565
Depreciation and amortization	1,475	1,650
Interest expense, net	585	525
Normalized EBITDA [(a)]	$ 9,000	$ 10,000

(a) Reflects a 2022 year-end asset portfolio w ith 2013-2022 historical average margins and operating rates and the Company's strategic initiatives.