SECOND QUARTER 2023 EARNINGS

August 4, 2023

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Creating solutions for everyday sustainable living

CAUTIONARY STATEMENT AND INFORMATION RELATED TO FINANCIAL MEASURES

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 continued operation of and successful shut down and closure of the Houston Refinery, including within the expected timeframe; 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.

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, net income and diluted EPS 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, net income and diluted EPS 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.

Recurring annual EBITDA for the Value Enhancement Program is estimated based on 2017-2019 mid-cycle margins and modest inflation relative to a 2021 baseline. Estimated recurring annual EBITDA for individual projects cannot be reconciled to net income due to the inherent difficulty in quantifying certain amounts that are necessary for such reconciliation at the project level, including adjustments that could be made for provision for (benefit from) income taxes and depreciation & amortization, the amounts of which, based on historical experience, could be significant.

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 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 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 excluding identified items 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 excluding identified items means total debt minus cash and cash equivalents, restricted cash and short-term investments divided by EBITDA excluding identified items. 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. Reconciliations for our non-GAAP measures can be found on our website at www.LyondellBasell.com/investorrelations.

DELIVERING RESULTS AND ADVANCING OUR STRATEGY

1

Delivered resilient results in challenging markets

2

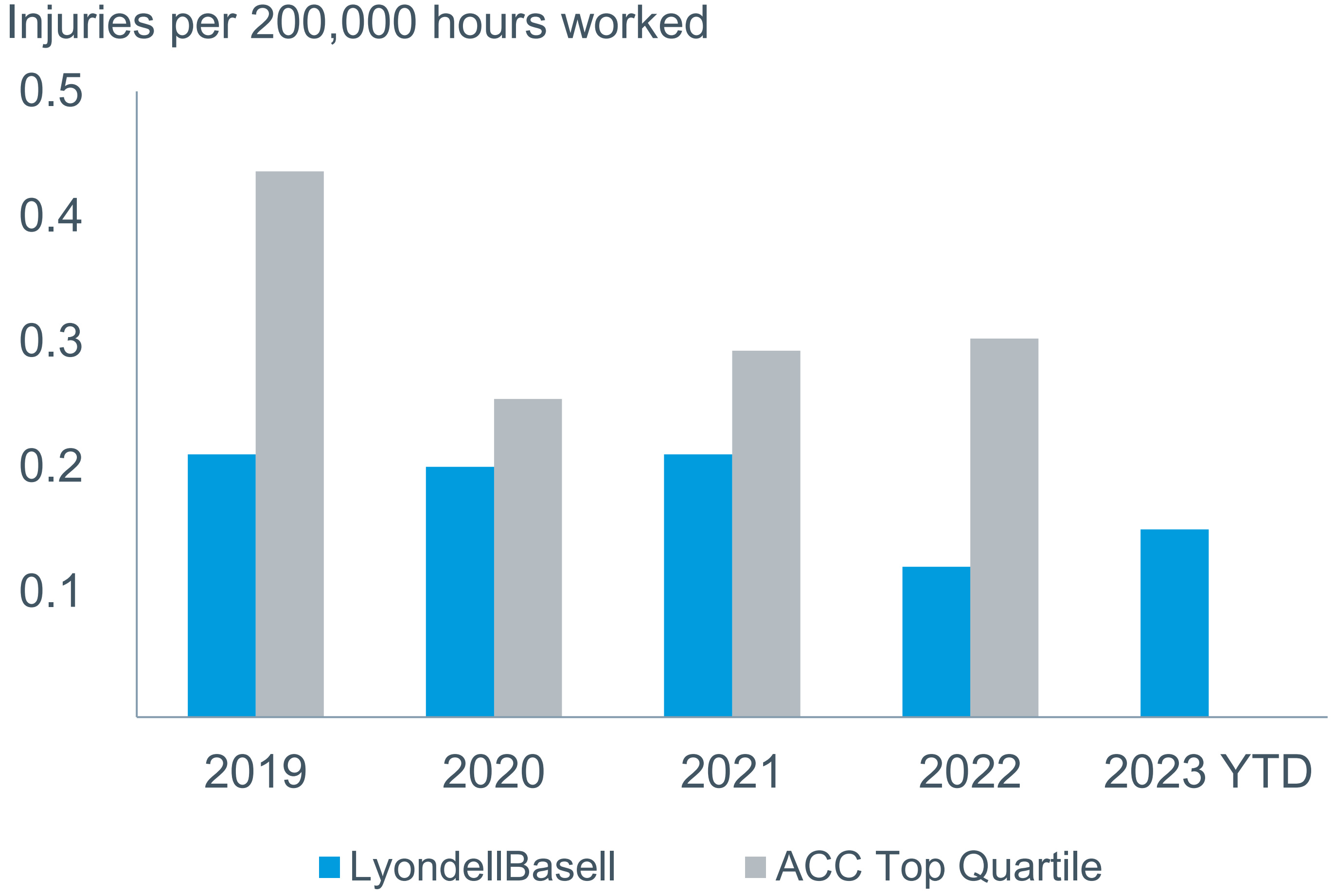
Optimizing our advantaged positions amid volatile feedstock and energy costs

3

Rapidly executing on our long-term strategy

SAFETY PERFORMANCE

STEADFAST COMMITMENT TO LEADERSHIP IN SAFETY



Sources: American Chemistry Council (ACC) and LyondellBasell.
Notes: Medium and large companies only. Number of hours worked includes employees and contractors.

ADVANCING OUR STRATEGY

DELIVERING A MORE PROFITABLE AND SUSTAINABLE GROWTH ENGINE

GROW & UPGRADE THE CORE

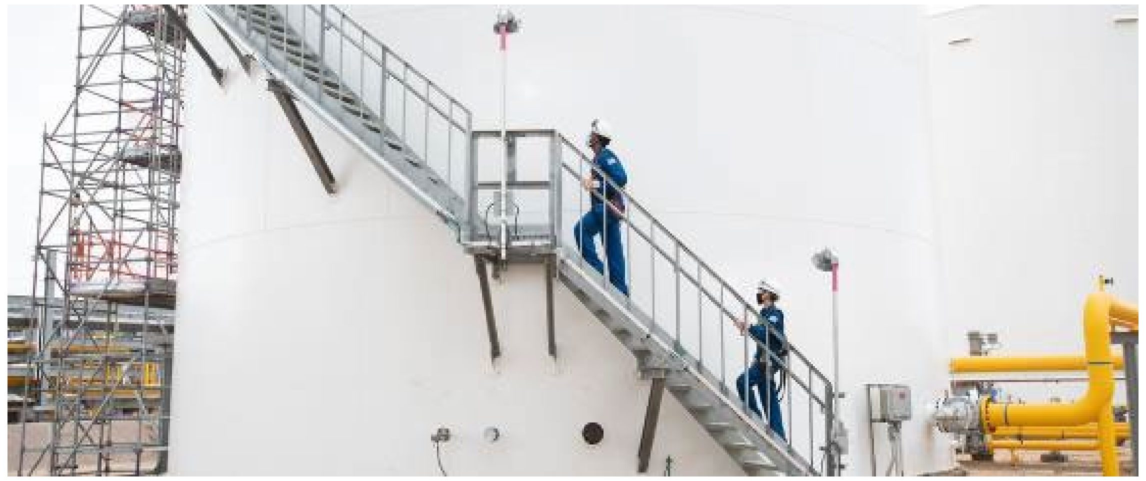
- Increased 2023 year-end annual recurring EBITDA from Value Enhancement Program to $200 MM
- New PO/TBA assets successfully completed technology performance tests
- Extending refining operations to no later than end of 1Q25 and developing options to transform the site in support of our growth in circular and low carbon solutions

BUILD A PROFITABLE CIRCULAR & LOW CARBON SOLUTIONS BUSINESS

- MoU with Technip and Chevron Phillips to build an electric furnance demonstration unit
- Invested in Pryme's pyrolysis process
- Agreement to form LMF Nord JV to build a flexible packaging recycling facility
- Consolidated QCP mechanical recycling facilities
- Acquired Mepol, a manufacturer of recycled high-performance compounds

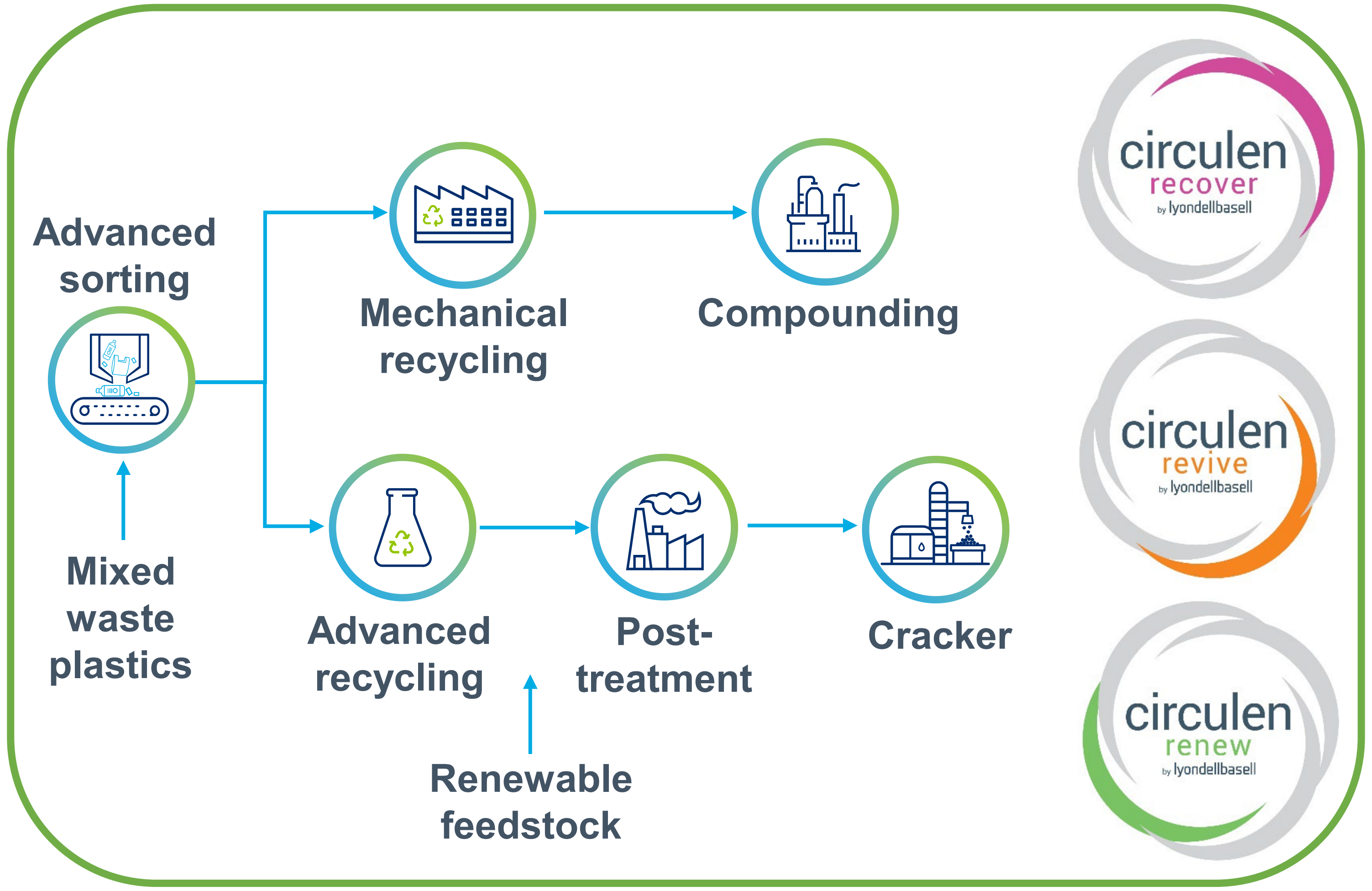
STEP UP PERFORMANCE & CULTURE

- Accelerating the progress of our Value Enhancement Program
- New management structure improving line of sight and driving accountability
- Customer and commercial excellence initiatives underway
- Solid progress on Advanced Polymer Solutions transformation



ESTABLISHING LEADERSHIP IN CIRCULAR SOLUTIONS THROUGH OUR DIFFERENTIATED APPROACH

BUILDING A PROFITABLE CIRCULAR & LOW CARBON SOLUTIONS BUSINESS



- ✓ Extending participation up and down value chains to maximize profitability
- ✓ Accessing existing waste feedstocks while investing in new technologies
- ✓ Leveraging innovation and partnerships to reduce our carbon footprint
- ✓ Providing tailored solutions through our APS compounding business
- ✓ Building capacity at scale to meet rapidly growing demand

Establishing business and operating models to support rapidly growing customer demand

~220,000 Tons
of recycled or renewable-based polymers produced and marketed by LyondellBasell since 2019

2,000,000+ Tons
of recycled or renewable-based polymers produced and marketed annually by 2030

2 MM tons is ~20% of LyondellBasell's 2022 PE and PP global sales

$1 B+
incremental EBITDA by 2030[1]

20%+ market share for LyondellBasell in North America and Europe

1. EBITDA is incremental to LyondellBasell's fossil-based O&P Americas and O&P EAI annual EBITDA.

SAVE THE DATE

September 26, 2023

LyondellBasell
MoReTec Technology Webinar

Jim Seward,
EVP & Chief Innovation Officer

Yvonne van der Laan
EVP, Circular & Low Carbon Solutions

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ACCELERATING OUR PROGRESS IN UNLOCKING VALUE

VALUE ENHANCEMENT PROGRAM (VEP) IS GAINING MOMENTUM

Prior target

$150 MM

Recurring annual EBITDA by year end 2023

Updated target

$200 MM

Recurring annual EBITDA by year end 2023

- 2023 one-time CAPEX/OPEX costs to achieve estimated at $150 MM

$750 MM

Recurring annual EBITDA by year end 2025

Launched 3Q 2022

Updated 2Q 2023

2025

DELIVERING RESULTS

- Progressing ahead of plan for 2023
- Inspiring a more agile and entrepreneurial mindset throughout our workforce
- Expanding VEP to Europe and smaller U.S. sites
- Embedding VEP as a continuous improvement process to implement new ideas beyond 2025

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

IMPLEMENTING VALUE ENHANCEMENT PROGRAM ACROSS OUR BUSINESSES

DELIVERING VALUE THROUGH DISCIPLINED GOVERNANCE AND RAPID IMPLEMENTATION

Improving LDPE Reliability

- Upgraded valve controllers to improve performance in LDPE plant
- Implementation cost ~$60,000
- **$0.4 MM** estimated recurring annual EBITDA

Capturing Value By Broadening Supplier Base

- Invested engineering and procurement resources to expand supplier pool for medium voltage motors
- Implementation cost ~$70,000 through 2026
- **$0.4 MM** estimated recurring annual EBITDA and improved security of supply

Increasing Yield and Reducing Energy Usage with Advanced Process Controls

- Utilized advanced process controls system to improve distillation tower efficiency with higher butadiene yield and lower steam consumption
- Implementation cost ~$50,000
- **$1.4 MM** estimated recurring annual EBITDA

Upgrading Olefins Byproduct Stream

- Installed filtration system to upgrade a byproduct gasoline stream in our alkylation plant to increase margins and maximize throughput
- Implementation cost ~$550,000
- **$5.1 MM** estimated recurring annual EBITDA

Note: Estimated recurring annual EBITDA for individual projects cannot be reconciled to net income due to the inherent difficulty in quantifying certain amounts that are necessary for such reconciliation at the project level, including adjustments that could be made for provision for (benefit from) income taxes and depreciation & amortization, the amounts of which, based on historical experience, could be significant.

SECOND QUARTER 2023 HIGHLIGHTS

RESILIENT RESULTS AND STRONG CASH GENERATION DESPITE CHALLENGING MARKET CONDITIONS

$0.7 B

NET INCOME

$0.8 B

NET INCOME
ex. Identified Items

$2.18

DILUTED EPS

$2.44

DILUTED EPS
ex. Identified Items

$1.4 B

EBITDA

$1.5 B

EBITDA
ex. Identified Items

$1.3 B

CASH FROM
OPERATING ACTIVITIES

$6.6 B

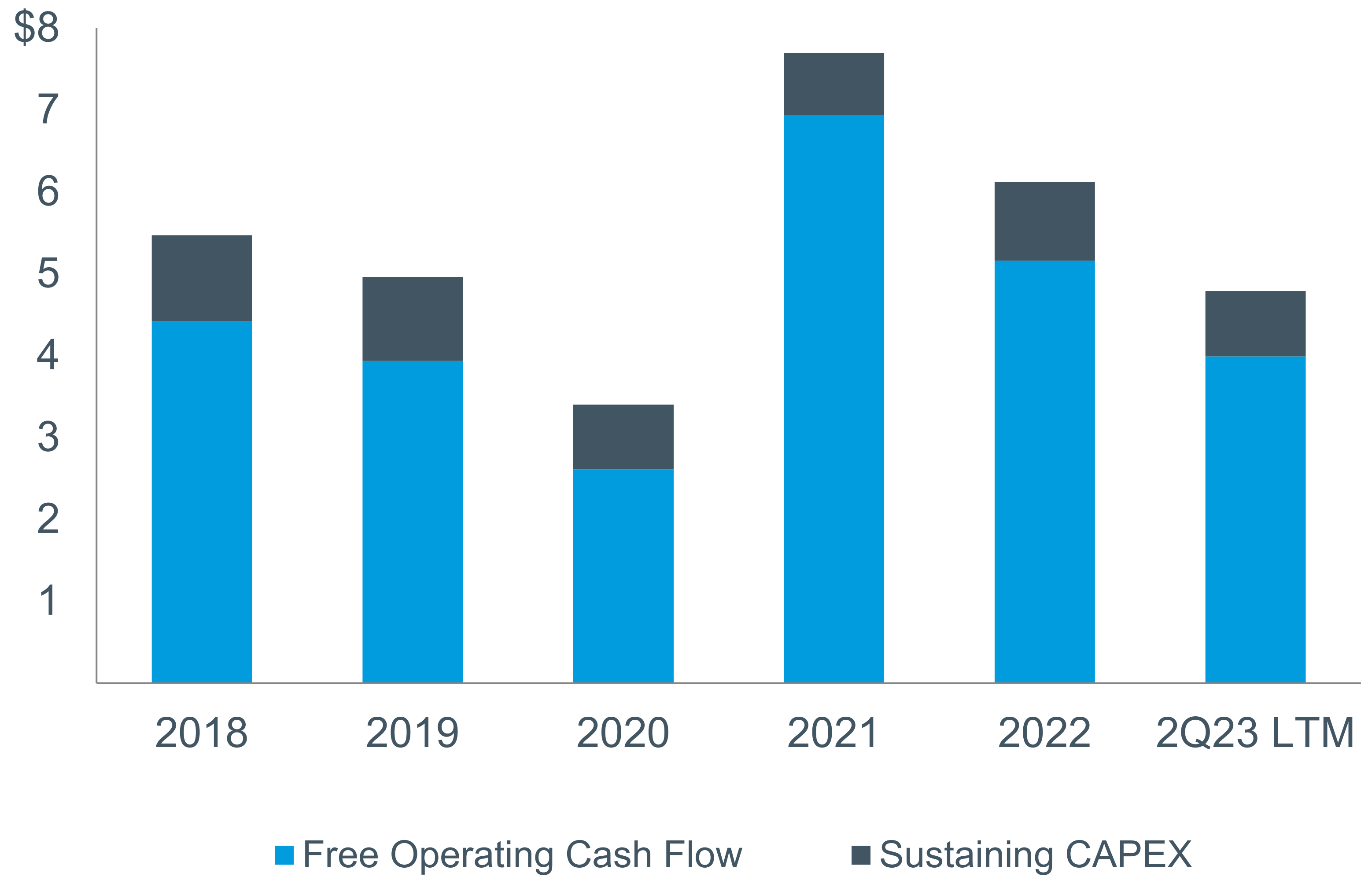
LIQUIDITY

Note: Identified items include adjustments for lower of cost or market ("LCM"), impairments and refinery exit costs.

GENERATING SIGNIFICANT CASH

OUTSTANDING CASH CONVERSION SUPPORTING STRONG BALANCE SHEET AND SHAREHOLDER RETURNS

Cash from Operating Activities
USD, billions



$4.8 B CASH FROM OPERATING ACTIVITIES
2Q23 LTM

$2.5 B CASH AND CASH EQUIVALENTS
Balance as of June 30, 2023

1.8x NET DEBT TO EBITDA EX. IDENTIFIED ITEMS
June 30, 2023

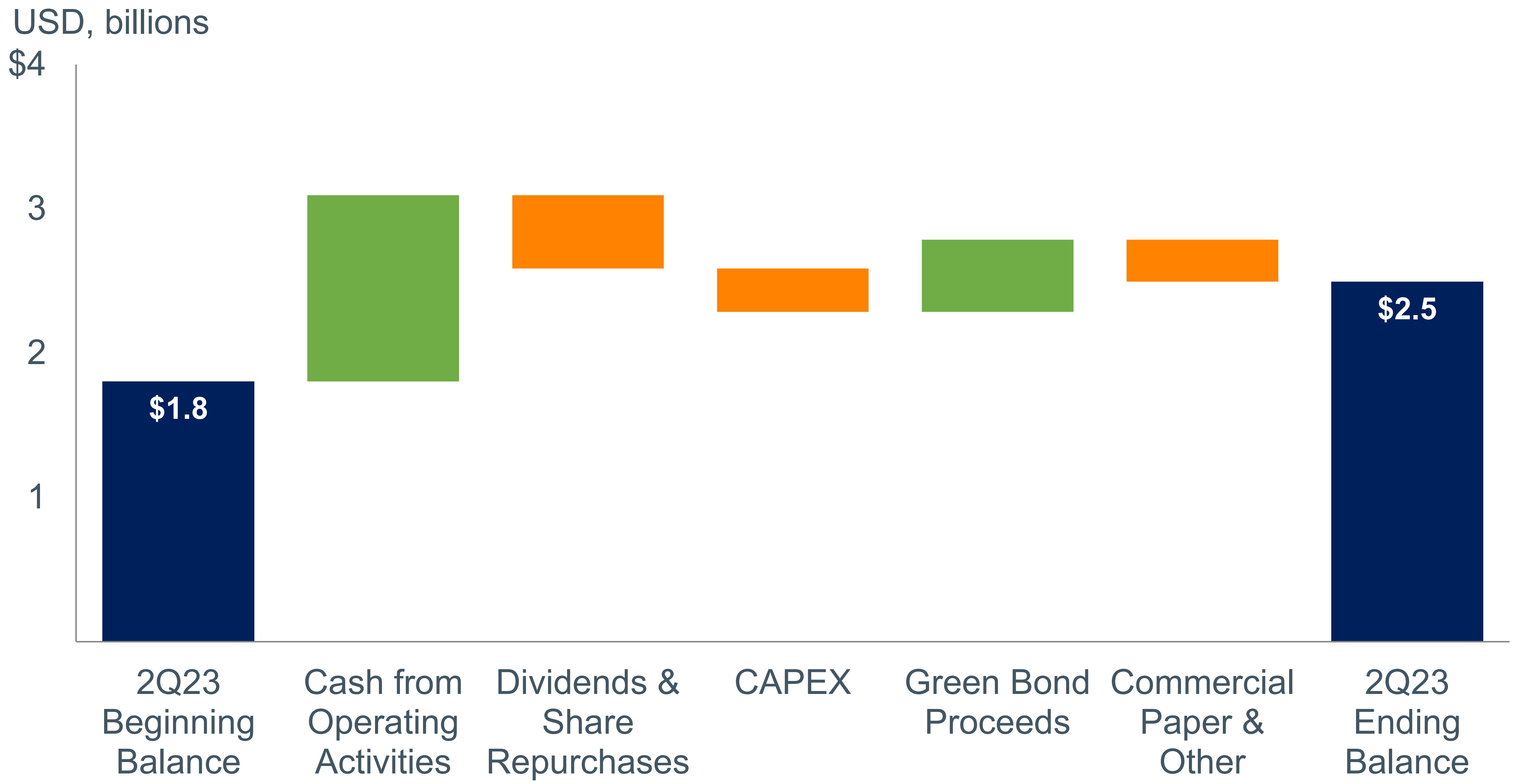
103% CASH CONVERSION
2Q23 LTM

$1.9 B RETURNED TO SHAREHOLDERS IN DIVIDENDS AND SHARE REPURCHASES
2Q23 LTM

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

CASH ALLOCATION

COMMITTED TO OUR BALANCED CAPITAL ALLOCATION STRATEGY



DELIVERING RESULTS

- Generated $1.3 B in cash from operating activities
- Issued $500 MM inaugural green bond

GENERATING VALUE FOR SHAREHOLDERS

- Increased quarterly dividend by 5% to $1.25 per share
- Returned $508 MM to shareholders through dividends and share repurchases in 2Q23

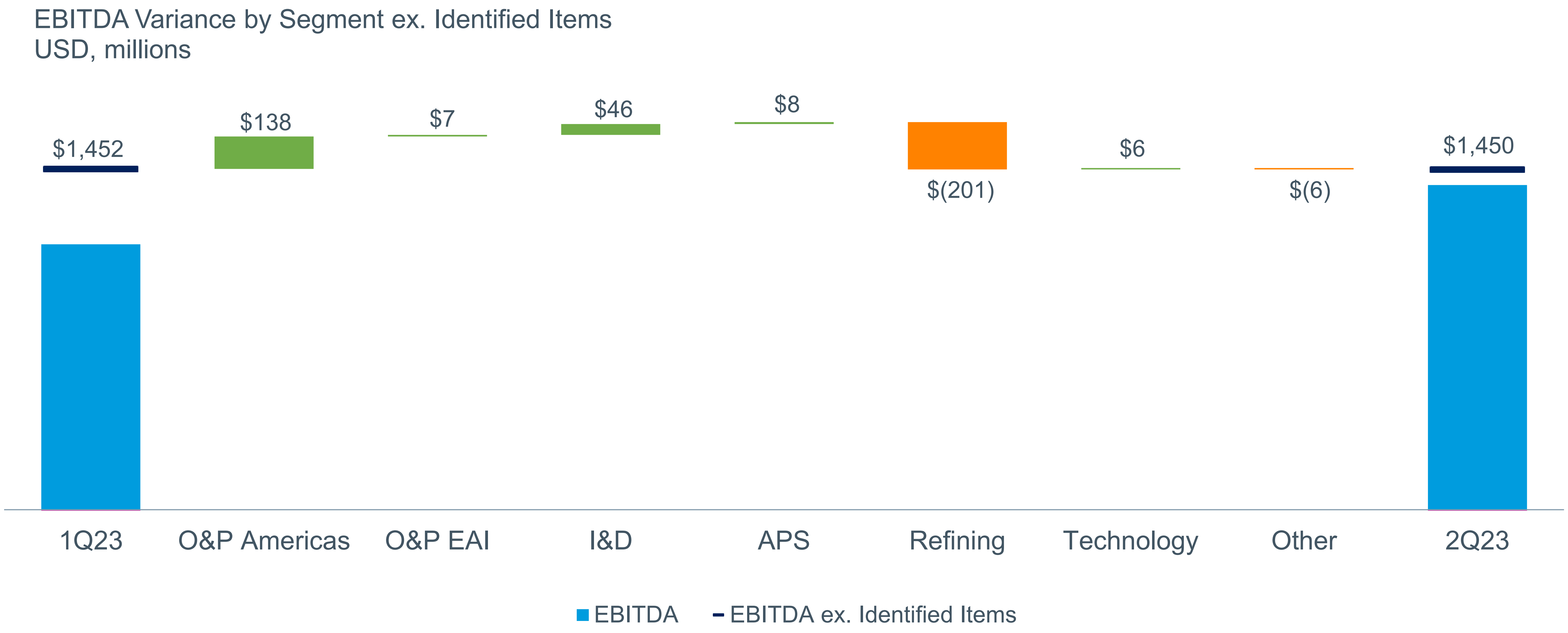
GROWING THROUGH INVESTMENT

- Produced propylene oxide and oxyfuels at full rates from our new PO/TBA facilities
- Value Enhancement Program progressing at a rapid pace

Notes: Beginning and ending cash balances include cash and cash equivalents, restricted cash, and liquid investments.

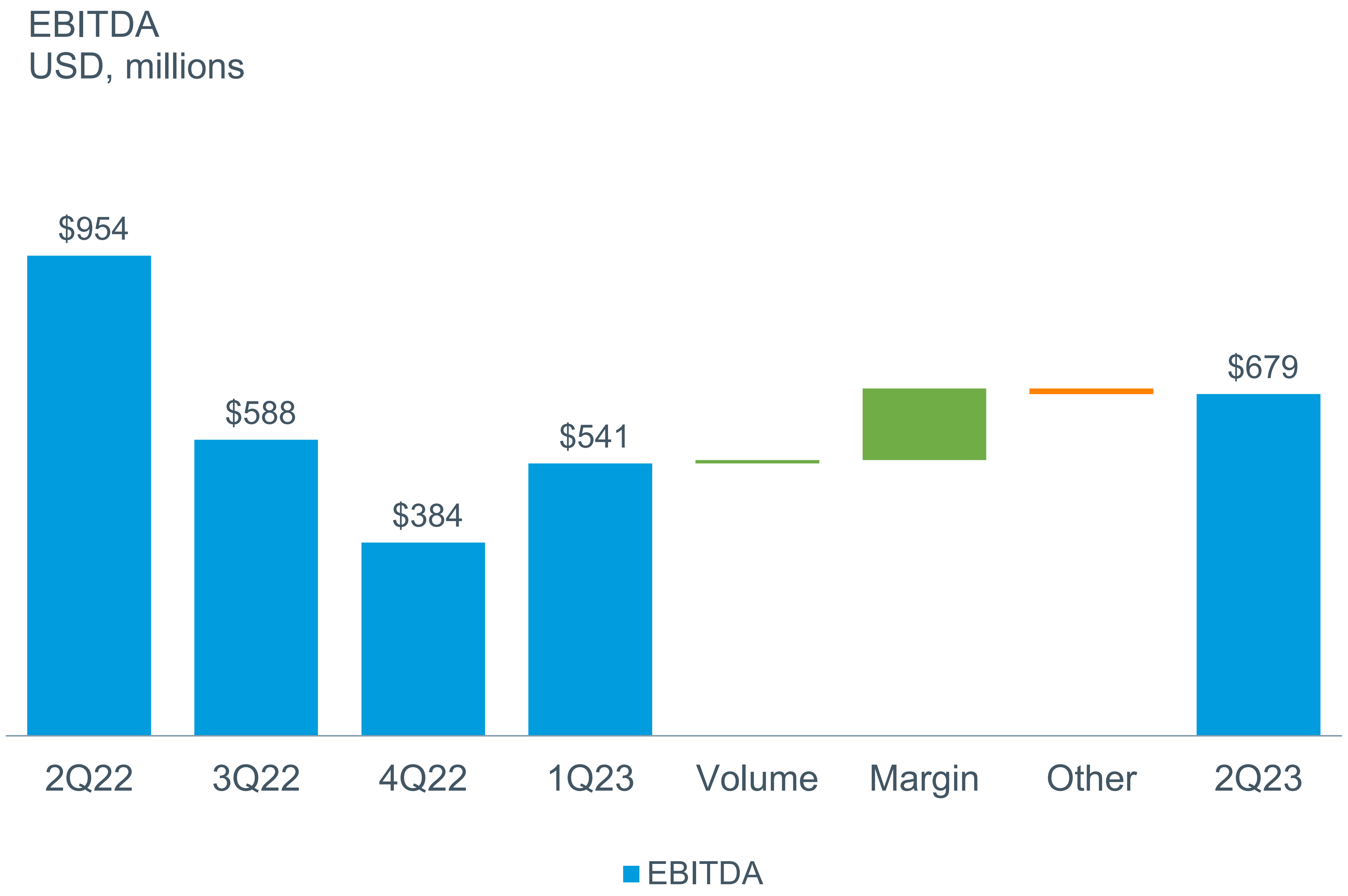
2Q23 SEGMENT HIGHLIGHTS

MODEST IMPROVEMENTS IN O&P MARGINS AND I&D VOLUMES OFFSET BY WEAKER REFINING MARGINS



OLEFINS & POLYOLEFINS – AMERICAS

HIGHER INTEGRATED POLYETHYLENE MARGINS DUE TO LOWER ETHANE COSTS



2Q23 MARKET DYNAMICS

- Improved integrated polyethylene margins with higher U.S. sales prices and lower ethane costs
- Weak demand for durable goods impacting polypropylene margins

NEAR-TERM OUTLOOK

- Volatile 3Q23 feedstock costs and new capacity compressing margins
- Underlying demand tepid; LYB customers and consumers buying cautiously

OUR ACTIONS

MoU with Technip and Chevron Phillips to build an **electric furnace** demonstration unit at our Channelview site

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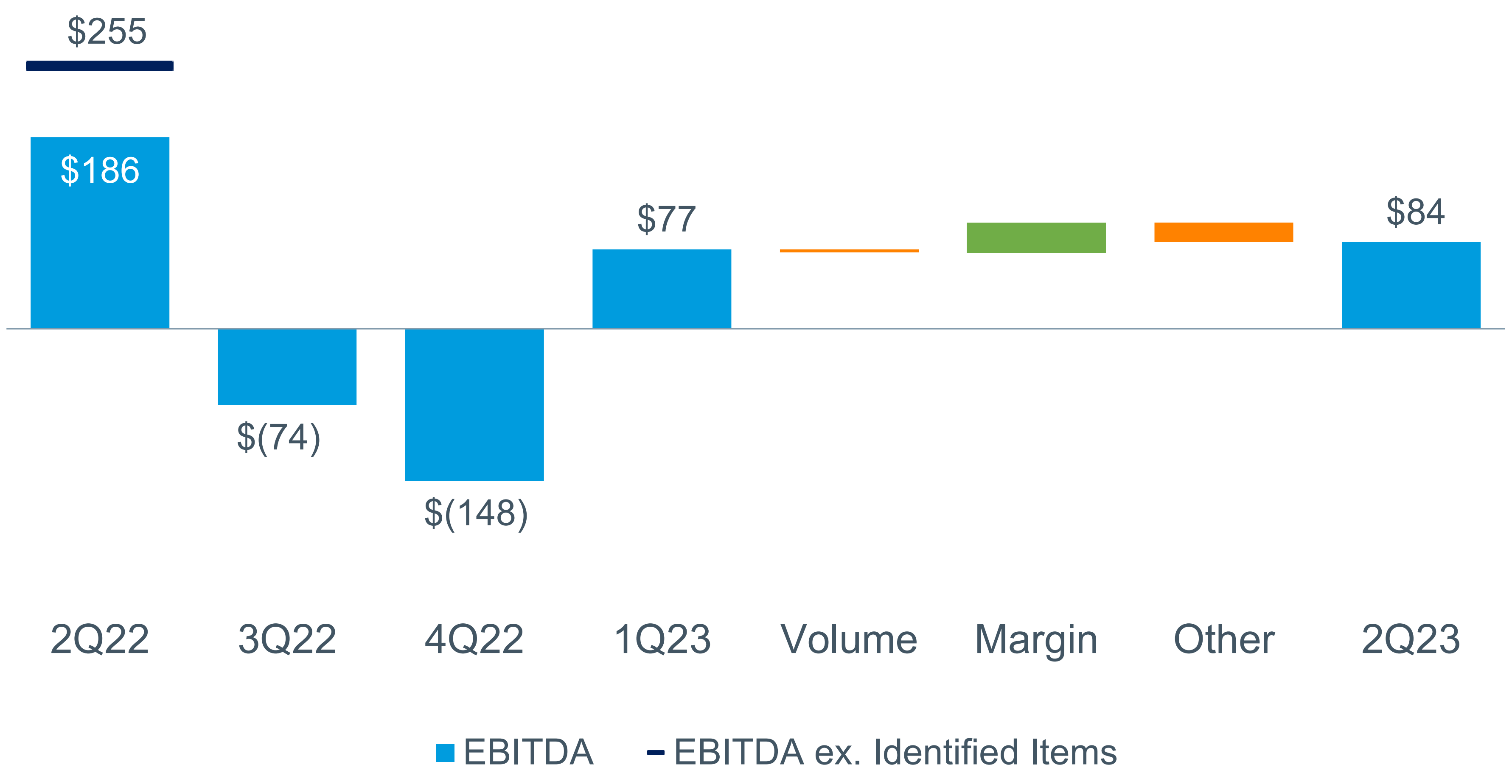
OLEFINS & POLYOLEFINS – EUROPE, ASIA & INTERNATIONAL

HIGHER ETHYLENE MARGINS DUE TO LOWER CRACKER FEEDSTOCK COSTS

EBITDA ex. Identified Items
USD, millions



2Q23 MARKET DYNAMICS

- Lower cracker feedstock costs
- Comparable polyolefins volumes with continued weak demand, especially for durable goods

NEAR-TERM OUTLOOK

- European markets remain challenging due to consumer uncertainty and energy volatility
- Slow economic activity and lack of import demand from China impacting global supply/demand balances

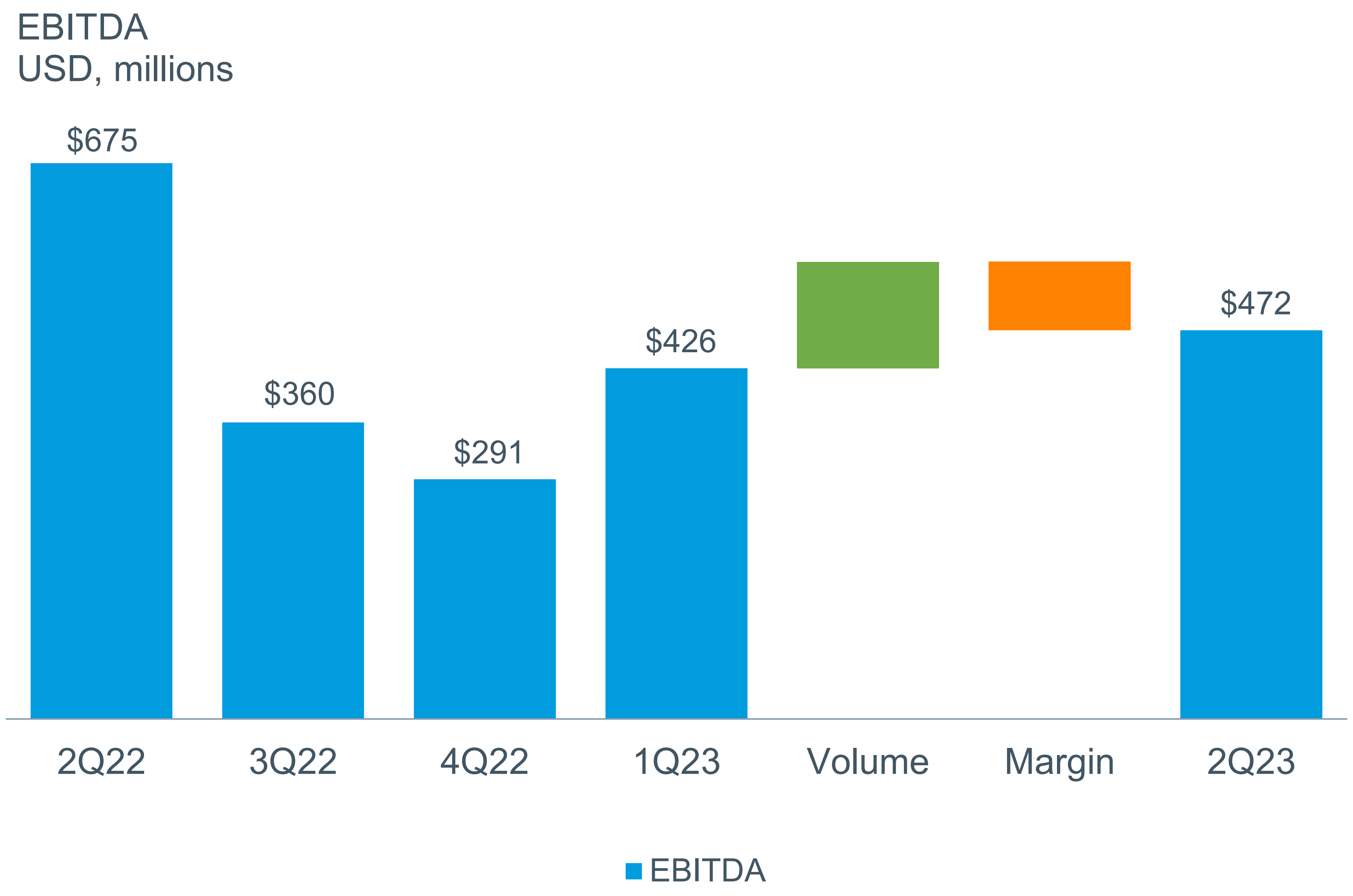
OUR ACTIONS

Advancing our strategy for recycled and renewable-based polymers:

- Consolidated ownership of QCP **mechanical recycling** business
- Invested in Pryme's plastic waste **pyrolysis process** in the Netherlands
- Agreement to form LMF Nord JV to build a **flexible packaging recycling** facility in Germany

INTERMEDIATES & DERIVATIVES

HIGHER OXYFUELS VOLUMES OFFSET BY LOWER MARGINS ACROSS MOST BUSINESSES



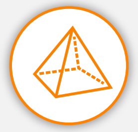
2Q23 MARKET DYNAMICS

- Higher oxyfuels volumes partially offset by slightly lower margins
- New propylene oxide capacity largely offset by planned maintenance
- Weak demand for durable goods pressuring propylene oxide and derivatives margins

NEAR-TERM OUTLOOK

- Planned maintenance at two existing LYB propylene oxide assets in 2H23
- Idling LYB PO/SM capacity in U.S. and Europe during July and August
- Seasonally higher butane costs expected to reduce oxyfuels margins in 2H23

OUR ACTIONS



Completed technology performance tests at our new PO/TBA facilities

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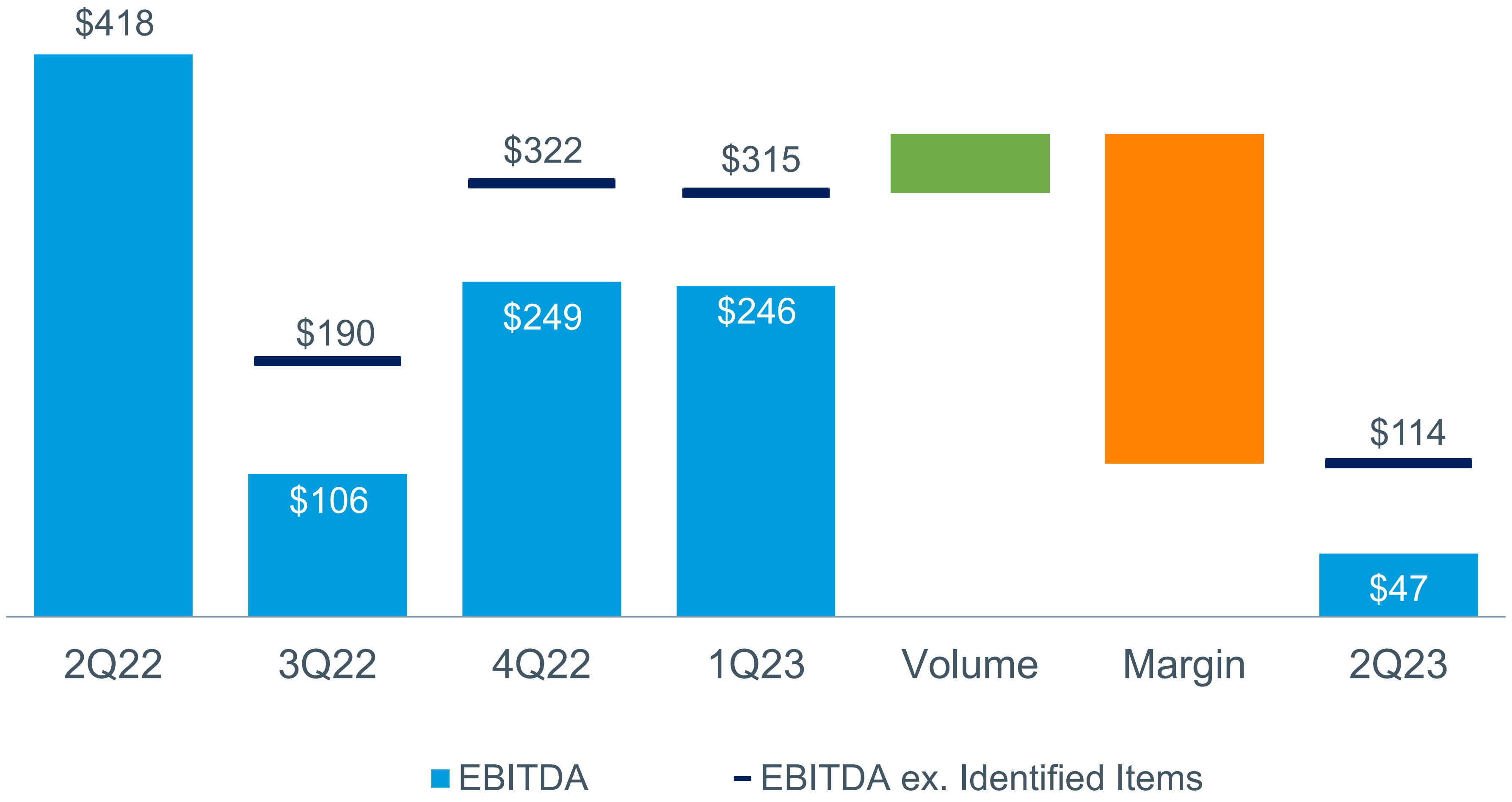
REFINING

MARGIN DECREASE DRIVEN BY LOWER REFINING CRACK SPREADS

EBITDA ex. Identified Items
USD, millions



2Q23 MARKET DYNAMICS

- Both Maya and WCS crack spreads declined relative to 1Q23

NEAR-TERM OUTLOOK

- Stable demand
- Refined product inventories remain low
- Further moderation in crack spreads
- Targeting ~93% LYB refinery utilization rate in 3Q23

OUR ACTIONS

Prioritizing safe and reliable operations

Extending the operations at our refining business to no later than the end of the first quarter 2025

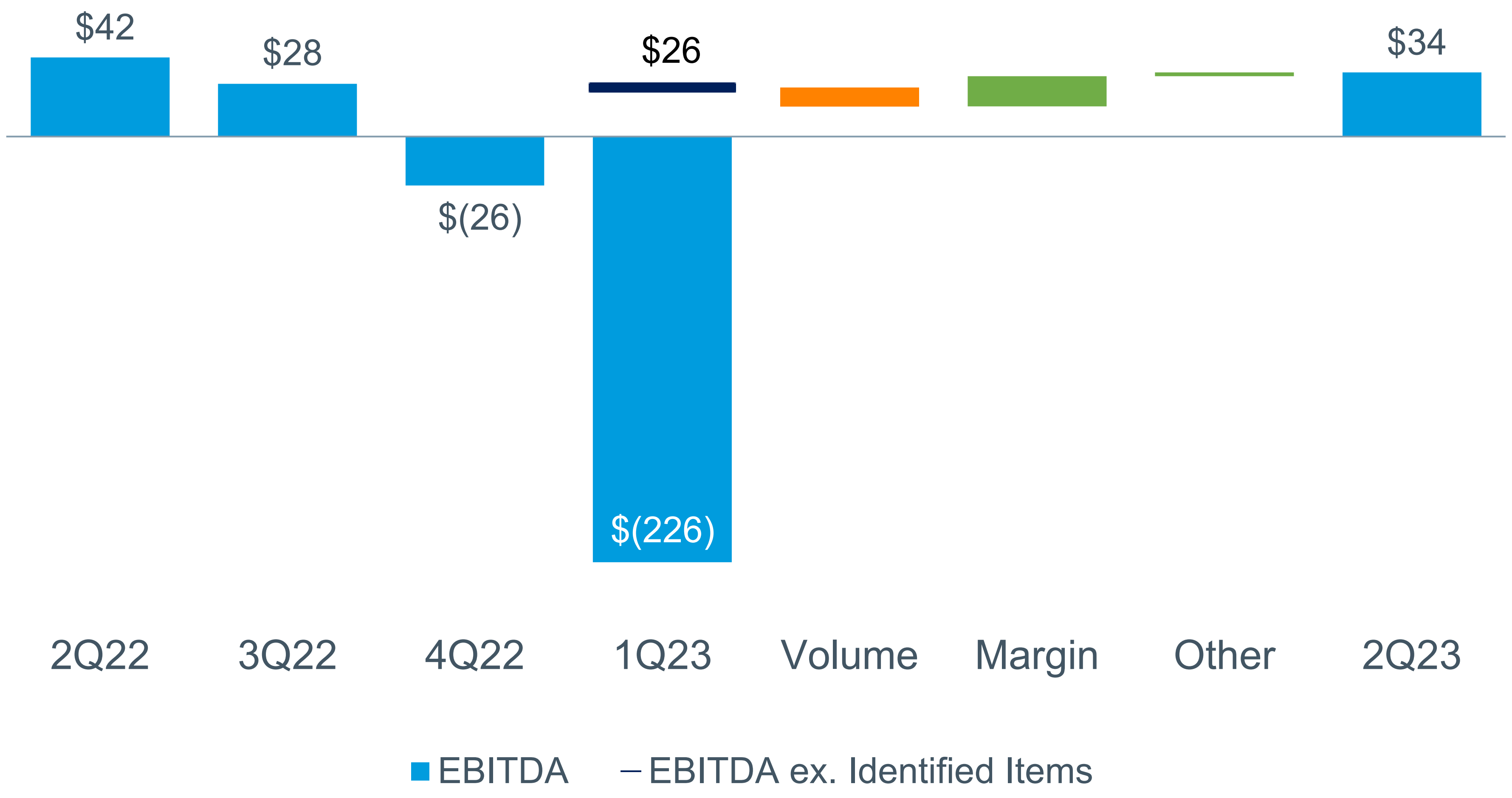
Planning for FCC maintenance in 4Q23

Evaluating options to transform site to support our growth in circular and low carbon solutions

ADVANCED POLYMER SOLUTIONS

MODERATELY HIGHER MARGINS DRIVEN BY IMPROVED PRICING AND LOWER ENERGY COSTS

EBITDA ex. Identified Items
USD, millions



2Q23 MARKET DYNAMICS

- Improved pricing for polypropylene compounds
- Demand from automotive market gained momentum
- Lower demand from construction and electronics markets

NEAR-TERM OUTLOOK

- Similar demand to 2Q
- North America and Europe automotive production gains higher than Asia
- Typical 3Q downtime at automotive OEMs

OUR ACTIONS

- Increasing customer centricity to maximize value
- Acquired Mepol, a manufacturer of recycled high-performance compounds

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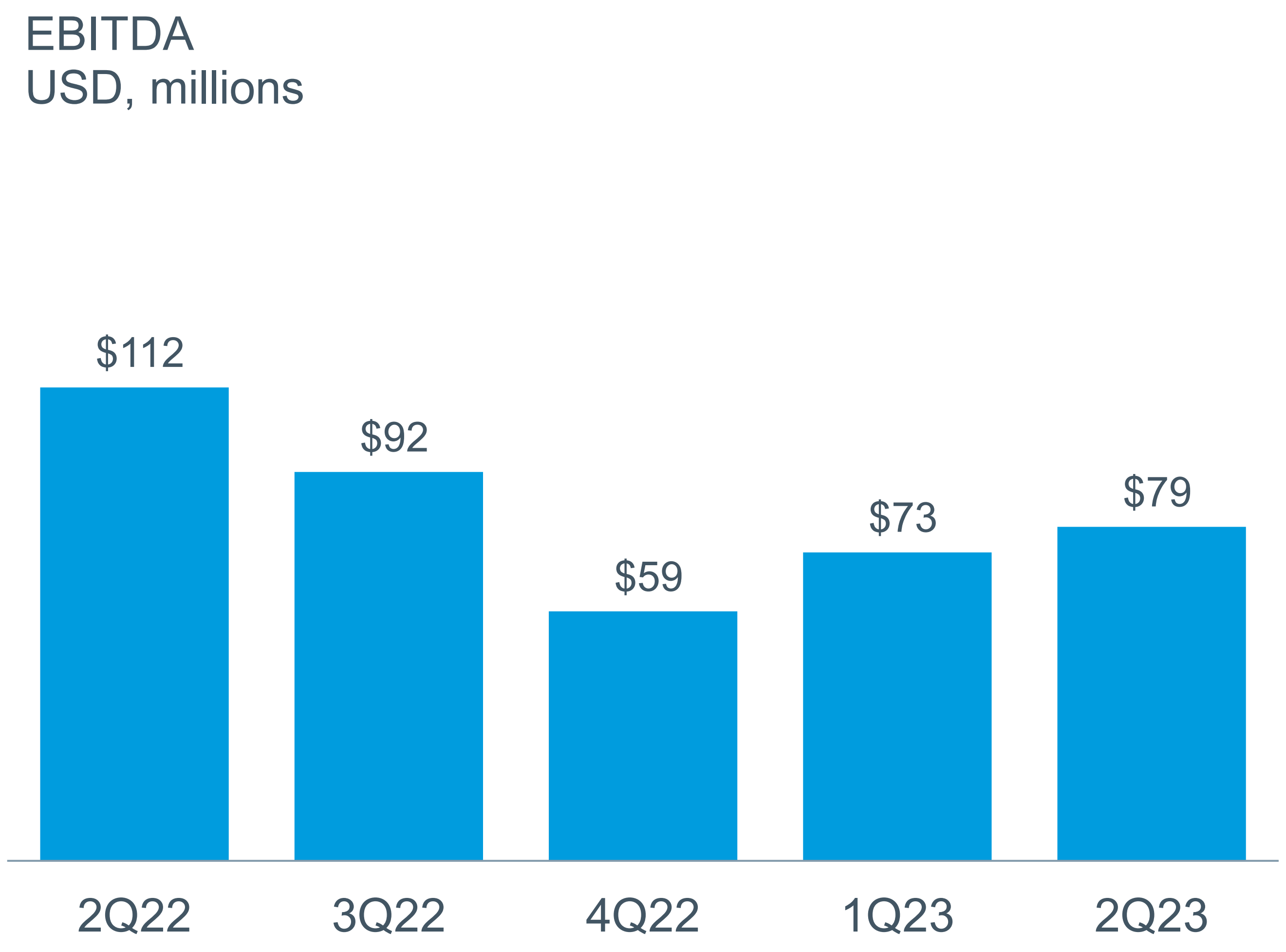
TECHNOLOGY

HIGHER LICENSING REVENUE AND LOWER CATALYST VOLUMES



2Q23 MARKET DYNAMICS

- Higher licensing revenue
- Lower catalyst volumes reflect continued low operating rates across the polyolefins industry

NEAR-TERM OUTLOOK

- Higher licensing revenue
- Moderately improving catalyst demand

OUR ACTIONS

Targeting 4Q23 investment decision on our first commercial advanced recycling plant utilizing LyondellBasell's proprietary ***MoReTec*** technology

MARKET OUTLOOK

1 Uncertain outlook driving soft demand

2 Volatile feedstock and energy costs

3 Operating rates tracking demand

REGIONS

North America	🟡	▪ Tepid underlying demand; LYB customers and consumers buying cautiously ▪ Near-term feedstock cost volatility and new capacity constraining margin improvement
Europe	🔴	▪ Consumer uncertainty and energy volatility restraining demand ▪ Near-term feedstock and energy costs lower than 2022
Asia	🔴	▪ Slow economic activity and lack of import demand from China impacting global supply/demand balances ▪ Limited benefits from initial stimulus initiatives

END MARKETS

Packaging	🟡	▪ Demand from service industries driving flexible packaging applications ▪ Customers minimizing inventories
Building & Construction	🟡	▪ Increased new-housing starts offset by reduced sales and maintenance of existing homes ▪ Potential tailwinds from U.S. stimulus projects: IRA, infrastructure and CHIPS
Automotive	🟢	▪ North America and Europe production gains higher than Asia ▪ Typical 3Q downtime at OEMs
Fuels	🟢	▪ Stable demand ▪ Refined product inventories remain low

DELIVERING RESULTS AND ADVANCING OUR STRATEGY

Delivering resilient results in challenging markets

RESULTS

- Moderately improved O&P margins amid tepid demand
- Oxyfuels and refining margins remained above historical levels
- Focused on cash generation, capital discipline and high returns for shareholders

OUTLOOK

- Soft demand
- Additional polyolefins capacity in North America and Asia
- Expect LYB 3Q23 EBITDA to be mid-teen to mid-twenty percentage points lower than 2Q23
- Closely monitoring markets for near-term risks and opportunities across sectors and geographies

Rapidly executing on our long-term strategy

Growing and upgrading our core to drive higher returns

Building a profitable Circular & Low Carbon Solutions business

Transforming from a singular focus on costs to a comprehensive approach to value creation

VEP Increased year-end 2023 annual recurring EBITDA for Value Enhancement Program to $200 MM

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APPENDIX

LYONDELLBASELL 2023 MODELING INFORMATION UPDATE

New PO/TBA Capacity

~50%

of 470 kt PO nameplate capacity during 2023 as plant ramps up

MANUFACTURING & OPERATIONAL EXCELLENCE

PROCUREMENT & SUPPLY CHAIN

COMMERCIAL EXCELLENCE

Value Enhancement Program (VEP)

~$200 MM

recurring annual EBITDA by the end of 2023

(2023 one-time CAPEX/OPEX costs to achieve estimated at $150 MM)

Major Planned Maintenance Estimated EBITDA Impact

(USD, millions)	1Q	2Q	3Q	4Q	2023
O&P Americas	--	~$110	~$60	--	~$170
Intermediates & Derivatives	--	~$70	~$20	~$120	~$210
Refining				~$25	~$25

Planned Refining Exit Costs

	1Q	2Q	3Q	4Q	2023
Estimated EBITDA impact	$69	$67	~$30	~$30	~$200
Additional estimated depreciation impact	$55	$44	~$20	~$20	~$140

Capital Expenditures

Total CAPEX (includes VEP)

~$1.7 B

Sustaining | Profit Generating CAPEX

~$1.2 B | ~$0.5 B

Financial Metrics

Net Interest Expense

~$405 MM

Depreciation & Amortization

~$1.5 B

Pension Contribution | Expense

~$65 MM | ~$105 MM

Effective Tax Rate

~20%

Notes: LyondellBasell's global annual PO capacity, including capacity owned by third parties through a joint venture agreement, was 2.6 million tons as of December 31, 2022.
Major planned maintenance estimated EBITDA impact is the estimated lost production multiplied by forecast margins.
Depreciation & Amortization includes estimated depreciation impact of ~$140 million in 2023 related to the planned refining exit costs.
Blue indicates updated guidance.

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