

LYONDELLBASELL BUSINESS RESULTS DISCUSSION BY REPORTING SEGMENT

LyondellBasell manages operations through six operating segments: 1) Olefins and Polyolefins - Americas; 2) Olefins and Polyolefins - Europe, Asia and International; 3) Intermediates and Derivatives; 4) Advanced Polymer Solutions; 5) Refining; and 6) Technology.

This information should be read in conjunction with our Earnings Release for the period ended September 30, 2021, including the forward-looking statements and information related to financial measures. Comments and analysis represent underlying business activity and are exclusive of LCM.

Olefins & Polyolefins - Americas (O&P-Americas) - Our O&P-Americas segment produces and markets Olefins & Co-products, polyethylene and polypropylene.

Table 1 - O&P-Americas Financial Overview

<i>Millions of U.S. dollars</i>	Three Months Ended			Nine Months Ended	
	September 30, 2021	June 30, 2021	September 30, 2020	September 30, 2021	September 30, 2020
Operating income	\$1,403	\$1,395	\$309	\$3,485	\$654
EBITDA	1,568	1,576	474	4,011	1,088
LCM (benefits) charges, pre-tax	—	—	(70)	—	3
EBITDA excluding LCM	1,568	1,576	404	4,011	1,091

Three months ended September 30, 2021 versus three months ended June 30, 2021 - EBITDA decreased \$8 million versus the second quarter 2021. Compared to the prior period, olefins results decreased approximately \$75 million with lower margins and volumes. Despite relatively stable benchmark ethylene margins, our margins declined as we purchased ethylene to supplement production and meet strong derivative demand. Volumes decreased due to unplanned maintenance. We operated the ethylene crackers at 89 percent of capacity with the raw materials being 60 percent ethane and about 25 percent other natural gas liquids. Combined polyolefins results increased more than \$75 million driven by higher spreads. Robust demand drove polyolefins spread increases with higher product prices outpacing rising monomer costs and resulted in record high polypropylene spreads.

Three months ended September 30, 2021 versus three months ended September 30, 2020 - EBITDA increased \$1,164 million versus the third quarter 2020, excluding an unfavorable variance of \$70 million due to a third quarter 2020 LCM inventory benefit. Compared to the prior period, results increased approximately \$60 million due to last in, first out (LIFO) inventory charges from the third quarter 2020. Olefins results increased approximately \$570 million driven by higher margins primarily due to higher ethylene, propylene and other co-product pricing outpacing increases in feedstock costs. Combined polyolefin results increased more than \$525 million due to higher polyolefins spreads with increasing product prices outpacing higher monomer costs. Joint venture equity income increased \$15 million due to higher volumes and margins at our Indelpro polypropylene joint venture in Mexico. Results from our Louisiana joint venture are embedded in the segment's olefins and polyethylene profitability and are not reflected in equity income.

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

Table 2 - O&P-EAI Financial Overview

<i>Millions of U.S. dollars</i>	Three Months Ended			Nine Months Ended	
	September 30, 2021	June 30, 2021	September 30, 2020	September 30, 2021	September 30, 2020
Operating income	\$361	\$551	\$52	\$1,171	\$268
EBITDA	474	708	148	1,594	522
LCM (benefits) charges, pre-tax	—	—	(17)	—	53
EBITDA excluding LCM	474	708	131	1,594	575

Three months ended September 30, 2021 versus three months ended June 30, 2021 - EBITDA decreased \$234 million versus the second quarter 2021. Third quarter 2021 results included approximately \$10 million in charges due to a decrease in the euro versus the U.S. dollar exchange rate relative to the second quarter 2021. Compared to the prior period, olefins results decreased about \$50 million due to lower margins and volumes. Margins declined driven by higher feedstock costs, partially offset by higher ethylene and co-product prices. We operated the ethylene crackers at 92 percent of capacity due to planned maintenance with approximately 35 percent of the raw materials from advantaged feedstocks. Combined polyolefins results decreased approximately \$120 million as lower seasonal demand drove declines in polyolefin price spreads over monomer and reduced volumes. Joint venture equity income decreased about \$35 million due to lower spreads.

Three months ended September 30, 2021 versus three months ended September 30, 2020 - EBITDA increased \$343 million versus the third quarter 2020, excluding an unfavorable variance of \$17 million due to a third quarter 2020 LCM inventory benefit. Compared to the prior period, results increased approximately \$20 million due to LIFO inventory charges from the third quarter 2020. Olefins results increased approximately \$75 million driven by higher margins primarily due to higher ethylene and co-product prices, partially offset by higher feedstock costs. Combined polyolefins results increased about \$225 million due to strong demand and tight markets driving higher polyethylene and polypropylene price spreads over monomer. Joint venture equity income increased approximately \$25 million due to higher spreads.

Intermediates & Derivatives (I&D) - Our I&D segment produces and markets Propylene Oxide & Derivatives, Oxyfuels & Related Products and Intermediate Chemicals, such as styrene monomer, acetyls, ethylene oxide and ethylene glycol.

Table 3 - I&D Financial Overview

<i>Millions of U.S. dollars</i>	Three Months Ended			Nine Months Ended	
	September 30, 2021	June 30, 2021	September 30, 2020	September 30, 2021	September 30, 2020
Operating income	\$247	\$493	\$180	\$828	\$335
EBITDA	348	596	267	1,126	571
LCM (benefits) charges, pre-tax	—	—	(22)	—	76
EBITDA excluding LCM	348	596	245	1,126	647

Three months ended September 30, 2021 versus three months ended June 30, 2021 - EBITDA decreased \$248 million versus the second quarter 2021. Third quarter 2021 results were impacted by approximately \$25 million due to site closure costs associated with the exit of our ethanol business. Compared to the prior period, Propylene Oxide & Derivatives results decreased approximately \$15 million due to lower margins, partially offset by increased volumes. Margins declined slightly from the historical highs of the second quarter 2021. Volumes increased due to continued strong durable goods demand. Intermediate Chemicals results decreased about \$140 million due to lower margins in most businesses, primarily styrene, and lower volumes as a result of acetyls downtime. Oxyfuels & Related Products results decreased approximately \$40 million due to lower margins driven by increased butane feedstock prices, partially offset by increased volume from improved demand.

Three months ended September 30, 2021 versus three months ended September 30, 2020 - EBITDA increased \$103 million versus the third quarter 2020, excluding a unfavorable variance of \$22 million due to LCM inventory benefits in the third quarter 2020. Third quarter 2021 results were impacted by approximately \$25 million due to site closure costs associated with the exit of our ethanol business. Compared to the prior period, results were impacted by LIFO inventory benefits of approximately \$20 million from the third quarter 2020. Propylene Oxide & Derivatives results increased about \$140 million due to strong demand and tight markets driving higher margins. Intermediate Chemicals results decreased approximately \$25 million driven by lower volumes in connection with downtime at our acetyls business. Oxyfuels & Related Products results increased \$45 million due to higher margins and volumes driven by higher demand and gasoline prices.

Advanced Polymer Solutions (APS) - Our Advanced Polymer Solutions segment produces and markets in two lines of business: Compounding & Solutions and Advanced Polymers. Compounding & Solutions includes polypropylene compounds, engineered plastics, masterbatches, engineered composites, colors and powders. Advanced Polymers consists of *Catalloy* and polybutene-1.

Table 4 - Advanced Polymer Solutions Financial Overview

<i>Millions of U.S. dollars</i>	Three Months Ended			Nine Months Ended	
	September 30, 2021	June 30, 2021	September 30, 2020	September 30, 2021	September 30, 2020
Operating income	\$94	\$101	\$116	\$299	\$103
EBITDA	121	129	157	385	226
LCM (benefits) charges, pre-tax	—	—	(40)	—	29
EBITDA excluding LCM	121	129	117	385	255

Three months ended September 30, 2021 versus three months ended June 30, 2021 - EBITDA decreased \$8 million versus the second quarter 2021. Compared with the prior period, Compounding & Solutions results were relatively unchanged as higher margins were partially offset by a decrease in volumes due to constrained production in automotive, appliance and other end markets as a result of semiconductor shortages. Advanced Polymers results decreased approximately \$10 million driven by lower margins and volumes primarily due to planned maintenance.

Three months ended September 30, 2021 versus three months ended September 30, 2020 - EBITDA increased \$4 million compared to the third quarter 2020, excluding an unfavorable variance of \$40 million due to LCM inventory benefits in the third quarter 2020. Compared with the prior period, results increased approximately \$15 million due to LIFO inventory charges from the third quarter 2020. Compounding & Solutions results decreased approximately \$25 million with lower volumes and margins. Volumes declined driven by constrained production in automotive, appliance and other end markets as a result of semiconductor shortages. Advanced Polymers results increased about \$10 million due to margin increases primarily driven by higher spreads over propylene in North America and higher volumes driven by increased construction demand.

Refining - Our Refining segment produces and markets gasoline and distillates, including diesel fuel, heating oil and jet fuel.

Table 5 - Refining Financial Overview

<i>Millions of U.S. dollars</i>	Three Months Ended			Nine Months Ended	
	September 30, 2021	June 30, 2021	September 30, 2020	September 30, 2021	September 30, 2020
Operating income (loss)	\$25	\$(95)	\$(733)	\$(200)	\$(931)
EBITDA	41	(81)	(692)	(150)	(799)
LCM (benefits) charges, pre-tax	—	—	(11)	—	2
Impairment, pre-tax	—	—	582	—	582
EBITDA excluding LCM and impairment	41	(81)	(121)	(150)	(215)

Three months ended September 30, 2021 versus three months ended June 30, 2021 - EBITDA increased \$122 million versus the second quarter 2021. Margin improved driven by higher prices for by-products, lower renewable identification number credits (RINs) cost and an increase in the Maya 2-1-1 industry benchmark crack spread of \$1.65 per barrel to \$23.11 per barrel. The Houston Refinery operated at 260,000 barrels per day, 12,000 barrels per day higher than prior period.

Three months ended September 30, 2021 versus three months ended September 30, 2020 - EBITDA increased \$162 million versus the third quarter 2020, excluding an unfavorable variance of \$11 million due to LCM inventory benefits and an impairment of \$582 million in the third quarter 2020. Margin increased driven by an increase in the Maya 2-1-1 industry benchmark crack spread of \$13.22 per barrel. Crude throughput increased by 44,000 barrels per day due to higher demand for transportation fuels.

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

Table 6 - Technology Financial Overview

<i>Millions of U.S. dollars</i>	Three Months Ended			Nine Months Ended	
	September 30, 2021	June 30, 2021	September 30, 2020	September 30, 2021	September 30, 2020
Operating income	\$144	\$82	\$101	\$308	\$252
EBITDA	155	92	111	341	279

Three months ended September 30, 2021 versus three months ended June 30, 2021 - EBITDA increased \$63 million compared to the second quarter 2021 resulting in a quarterly record driven by increased licensing revenue.

Three months ended September 30, 2021 versus three months ended September 30, 2020 - EBITDA increased \$44 million, versus the third quarter 2020. Licensing revenue increased due to a larger number of contract milestones.

Capital Spending and Cash Balances

Capital expenditures, including growth projects, maintenance turnarounds, catalyst and information technology-related expenditures, were \$514 million during the third quarter 2021. Our cash and liquid investment balance was \$1.9 billion, which includes cash and cash equivalents, restricted cash and short-term investments. We repurchased approximately 1 million shares during the third quarter. There were 334 million common shares outstanding as of September 30, 2021. The company paid dividends of \$380 million during the third quarter 2021.

Table 7 - Reconciliation of EBITDA to EBITDA Excluding LCM and Impairment by Segment

Millions of U.S. dollars	Three Months Ended			Nine Months Ended	
	September 30, 2021	June 30, 2021	September 30, 2020	September 30, 2021	September 30, 2020
EBITDA:					
Olefins & Polyolefins - Americas	\$ 1,568	\$ 1,576	\$ 474	\$ 4,011	\$ 1,088
Olefins & Polyolefins - EAI	474	708	148	1,594	522
Intermediates & Derivatives	348	596	267	1,126	571
Advanced Polymer Solutions	121	129	157	385	226
Refining	41	(81)	(692)	(150)	(799)
Technology	155	92	111	341	279
Other	(16)	(2)	1	(13)	(15)
Continuing Operations	<u>\$ 2,691</u>	<u>\$ 3,018</u>	<u>\$ 466</u>	<u>\$ 7,294</u>	<u>\$ 1,872</u>
Add: LCM charges (benefits), pre-tax:					
Olefins & Polyolefins - Americas	\$ —	\$ —	\$ (70)	\$ —	\$ 3
Olefins & Polyolefins - EAI	—	—	(17)	—	53
Intermediates & Derivatives	—	—	(22)	—	76
Advanced Polymer Solutions	—	—	(40)	—	29
Refining	—	—	(11)	—	2
Continuing Operations	<u>\$ —</u>	<u>\$ —</u>	<u>\$ (160)</u>	<u>\$ —</u>	<u>\$ 163</u>
EBITDA excluding LCM:					
Olefins & Polyolefins - Americas	\$ 1,568	\$ 1,576	\$ 404	\$ 4,011	\$ 1,091
Olefins & Polyolefins - EAI	474	708	131	1,594	575
Intermediates & Derivatives	348	596	245	1,126	647
Advanced Polymer Solutions	121	129	117	385	255
Refining	41	(81)	(703)	(150)	(797)
Technology	155	92	111	341	279
Other	(16)	(2)	1	(13)	(15)
Continuing Operations	<u>\$ 2,691</u>	<u>\$ 3,018</u>	<u>\$ 306</u>	<u>\$ 7,294</u>	<u>\$ 2,035</u>
Add: Impairment of long-lived assets, pre-tax:					
Refining	\$ —	\$ —	\$ 582	\$ —	\$ 582
EBITDA excluding LCM and impairment:					
Olefins & Polyolefins - Americas	\$ 1,568	\$ 1,576	\$ 404	\$ 4,011	\$ 1,091
Olefins & Polyolefins - EAI	474	708	131	1,594	575
Intermediates & Derivatives	348	596	245	1,126	647
Advanced Polymer Solutions	121	129	117	385	255
Refining	41	(81)	(121)	(150)	(215)
Technology	155	92	111	341	279
Other	(16)	(2)	1	(13)	(15)
Continuing Operations	<u>\$ 2,691</u>	<u>\$ 3,018</u>	<u>\$ 888</u>	<u>\$ 7,294</u>	<u>\$ 2,617</u>