UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-Q

(Mark One)

☑ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 2022

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: 001-33492

CVR ENERGY, INC.

(Exact name of registrant as specified in its charter)

Delaware		**61-1512186**
(State or other jurisdiction of incorporation or organization)		*(I.R.S. Employer Identification No.)*

2277 Plaza Drive, Suite 500, Sugar Land, Texas 77479
(Address of principal executive offices) (Zip Code)
(281) 207-3200
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.01 par value per share	CVI	The 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 ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	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 by Rule 12b-2 of the Exchange Act). Yes ☐ No ☑

There were 100,530,599 shares of the registrant's common stock outstanding at April 29, 2022.

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CVR Energy, Inc. - Quarterly Report on Form 10-Q
March 31, 2022

This Quarterly Report on Form 10-Q (including documents incorporated by reference herein) contains statements with respect to our expectations or beliefs as to future events. These types of statements are "forward-looking" and subject to uncertainties. See "Important Information Regarding Forward-Looking Statements" section of this filing.

Important Information Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q (this “Report”) contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), including, but not limited to, those under Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations. These forward-looking statements are subject to a number of risks and uncertainties, many of which are beyond our control. All statements other than statements of historical fact, including without limitation, statements regarding future operations, financial position, estimated revenues and losses, growth, capital projects, stock or unit repurchases, impacts of legal proceedings, projected costs, prospects, plans and objectives of management are forward-looking statements. The words “could,” “believe,” “anticipate,” “intend,” “estimate,” “expect,” “may,” “continue,” “predict,” “potential,” “project,” and similar terms and phrases are intended to identify forward-looking statements.

Although we believe our assumptions concerning future events are reasonable, a number of risks, uncertainties, and other factors could cause actual results and trends to differ materially from those projected or forward looking. Forward looking statements, as well as certain risks, contingencies or uncertainties that may impact our forward looking statements, include but are not limited to the following:

- volatile margins in the refining industry and exposure to the risks associated with volatile crude oil, refined product and feedstock prices;
- the availability of adequate cash and other sources of liquidity for the capital needs of our businesses;
- the severity, magnitude, duration, and impact of the novel coronavirus 2019 and any variant thereof (collectively, “COVID-19”) pandemic and of businesses’ and governments’ responses to such pandemic on our operations, personnel, commercial activity, and supply and demand across our and our customers’ and suppliers’ business;
- changes in market conditions and market volatility arising from the COVID-19 pandemic or inflation, including crude oil and other commodity prices, demand for those commodities, storage and transportation capacities, and the impact of such changes on our operating results and financial position;
- expectations regarding our business and the economic recovery relating to the COVID-19 pandemic, including beliefs regarding future customer activity and the timing of the recovery;
- the ability to forecast our future financial condition, results of operations, revenues and expenses;
- the effects of transactions involving forward or derivative instruments;
- changes in laws, regulations and policies with respect to the export of crude oil, refined products, other hydrocarbons or renewable feedstocks or products including, without limitation, the actions of the Biden Administration that impact oil and gas operations in the U.S.;
- interruption in pipelines supplying feedstocks or distributing the petroleum business’ products;
- competition in the petroleum and nitrogen fertilizer businesses, including potential impacts of domestic and global supply and demand and/or domestic or international duties, tariffs, or similar costs;
- capital expenditures;
- changes in our or our segments’ credit profiles;
- the cyclical and seasonal nature of the petroleum and nitrogen fertilizer businesses;
- the supply, availability and price levels of essential raw materials and feedstocks, and the effects of inflation thereupon;
- our production levels, including the risk of a material decline in those levels;
- accidents or other unscheduled shutdowns or interruptions affecting our facilities, machinery, or equipment, or those of our suppliers or customers;
- existing and future laws, regulations or rulings, including but not limited to those relating to the environment, climate change, renewables, safety, security and/or the transportation of production of hazardous chemicals like ammonia, including potential liabilities or capital requirements arising from such laws, regulations or rulings;
- potential operating hazards from accidents, fire, severe weather, tornadoes, floods, or other natural disasters;
- the impact of weather on commodity supply and/or pricing and on the nitrogen fertilizer business including our ability to produce, market or sell fertilizer products profitability or at all;
- rulings, judgments or settlements in litigation, tax or other legal or regulatory matters;
- the dependence of the nitrogen fertilizer business on customers and distributors including to transport goods and equipment;
- the reliance on, or the ability to procure economically or at all, pet coke our nitrogen fertilizer business purchases from Coffeyville Resources Refining & Marketing, LLC (“CRRM”), a subsidiary of CVR Refining, LP, and third-party suppliers or the natural gas, electricity, oxygen, nitrogen, sulfur processing and compressed dry air and other products purchased from third parties by the nitrogen fertilizer and petroleum businesses;
- risks associated with third party operation of or control over important facilities necessary for operation of our refineries and nitrogen fertilizer facilities;
- risks of terrorism, cybersecurity attacks, and the security of chemical manufacturing facilities and other matters beyond our control;

- political disturbances, geopolitical instability and tensions, and associated changes in global trade policies and economic sanctions, including, but not limited to, in connection with Russia's invasion of Ukraine in February 2022 and any ongoing conflicts in the region;
- our lack of diversification of assets or operating and supply areas;
- the petroleum business' and nitrogen fertilizer business' dependence on significant customers and the creditworthiness and performance by counterparties;
- the potential loss of the nitrogen fertilizer business' transportation cost advantage over its competitors;
- the potential inability to successfully implement our business strategies at all or on time and within our anticipated budgets, including significant capital programs or projects, turnarounds or renewable or carbon reduction initiatives at our refineries and fertilizer facilities, including pretreater, carbon sequestration, segregation of our renewables business and other projects;
- our ability to continue to license the technology used for our operations;
- our petroleum business' purchase of, or ability to purchase, renewable identification numbers ("RINs") on a timely and cost effective basis or at all;
- the impact of refined product demand, declining inventories, and Winter Storm Uri on refined product prices and crack spreads;
- Organization of Petroleum Exporting Countries' ("OPEC") production levels and pricing;
- the impact of RINs pricing, our blending and purchasing activities and governmental actions, including by the U.S. Environmental Protection Agency (the "EPA") on our RIN obligations, open RINs positions, small refinery exemptions, and our estimated consolidated cost to comply with our Renewable Fuel Standard ("RFS") obligations;
- our businesses' ability to obtain, retain or renew environmental and other governmental permits, licenses or authorizations necessary for the operation of its business;
- existing and proposed laws, regulations or rulings, including but not limited to those relating to climate change, alternative energy or fuel sources, and existing and future regulations related to the end-use of our products or the application of fertilizers;
- refinery and nitrogen fertilizer facilities' operating hazards and interruptions, including unscheduled maintenance or downtime and the availability of adequate insurance coverage;
- risks related to services provided by or competition among our subsidiaries, including conflicts of interests and control of CVR Partners, LP's general partner;
- instability and volatility in the capital, credit and commodities markets and in the global economy, including due to the ongoing Russia-Ukraine conflict;
- restrictions in our debt agreements;
- asset impairments and impacts thereof;
- the variable nature of CVR Partners, LP's distributions, including the ability of its general partner to modify or revoke its distribution policy, or to cease making cash distributions on its common units;
- changes in tax and other laws, regulations and policies, including, without limitation, actions of the Biden Administration that impact conventional fuel operations or favor renewable energy projects in the U.S.;
- changes in CVR Partners' treatment as a partnership for U.S. federal income or state tax purposes;
- our ability to recover under our insurance policies for damages or losses in full or at all; and
- the factors described in greater detail under "Risk Factors" in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2021 and our other filings with the Securities and Exchange Commission (the "SEC").

All forward-looking statements contained in this Report only speak as of the date of this Report. We undertake no obligation to publicly update or revise any forward-looking statements to reflect events or circumstances that occur after the date of this Report, or to reflect the occurrence of unanticipated events, except to the extent required by law.

Information About Us

Investors should note that we make available, free of charge on our website at cvrenergy.com, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. We also post announcements, updates, events, investor information and presentations on our website in addition to copies of all recent news releases. We may use the Investor Relations section of our website to communicate with investors. It is possible that the financial and other information posted there could be deemed to be material information. Documents and information on our website are not incorporated by reference herein.

The SEC maintains a website at www.sec.gov that contains reports, proxy and information statements, and other information regarding issuers, including us, that file electronically with the SEC.

PART I. FINANCIAL INFORMATION

Item 1. ***Financial Statements***

CVR ENERGY, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(unaudited)

(in millions)	March 31, 2022	December 31, 2021
ASSETS		
Current assets:		
Cash and cash equivalents (including $137 and $113, respectively, of consolidated variable interest entity (“VIE”))	**$ 676**	$ 510
Accounts receivable (including $44 and $88, respectively, of VIE)	**353**	299
Inventories (including $65 and $52, respectively, of VIE)	**683**	484
Prepaid expenses and other current assets (including $8 and $9, respectively, of VIE)	**54**	76
Total current assets	**1,766**	1,369
Property, plant and equipment, net (including $836 and $850, respectively, of VIE)	**2,269**	2,273
Other long-term assets (including $13 and $14, respectively, of VIE)	**310**	264
Total assets	**$ 4,345**	$ 3,906
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable (including $55 and $50, respectively, of VIE)	**$ 709**	$ 409
Other current liabilities (including $118 and $111, respectively, of VIE)	**843**	747
Total current liabilities	**1,552**	1,156
Long-term liabilities:		
Long-term debt and finance lease obligations, net of current portion (including $546 and $611, respectively, of VIE)	**1,589**	1,654
Deferred income taxes	**263**	268
Other long-term liabilities (including $16 and $12, respectively, of VIE)	**65**	58
Total long-term liabilities	**1,917**	1,980
Commitments and contingencies (See Note 12)		
CVR stockholders’ equity		
CVR Energy stockholders’ equity:		
Common stock, $0.01 par value per share; 350,000,000 shares authorized; 100,629,209 and 100,629,209 shares issued as of March 31, 2022 and December 31, 2021, respectively	**1**	1
Additional paid-in-capital	**1,508**	1,510
Accumulated deficit	**(863)**	(956)
Treasury stock, 98,610 shares at cost	**(2)**	(2)
Total CVR stockholders’ equity	**644**	553
Noncontrolling interest	**232**	217
Total equity	**876**	770
Total liabilities and equity	**$ 4,345**	$ 3,906

The accompanying notes are an integral part of these condensed consolidated financial statements.

CVR ENERGY, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited)

(in millions, except per share data)	Three Months Ended March 31, 2022	Three Months Ended March 31, 2021
Net sales	**$ 2,373**	$ 1,463
Operating costs and expenses:		
Cost of materials and other	**1,887**	1,369
Direct operating expenses (exclusive of depreciation and amortization)	**160**	136
Depreciation and amortization	**65**	63
Cost of sales	**2,112**	1,568
Selling, general and administrative expenses (exclusive of depreciation and amortization)	**39**	27
Depreciation and amortization	**2**	3
Operating income (loss)	**220**	(135)
Other (expense) income:		
Interest expense, net	**(24)**	(31)
Investment income on marketable securities	**—**	62
Other (expense) income, net	**(9)**	7
Income (loss) before income tax expense	**187**	(97)
Income tax expense (benefit)	**34**	(42)
Net income (loss)	**153**	(55)
Less: Net income (loss) attributable to noncontrolling interest	**59**	(16)
Net income (loss) attributable to CVR Energy stockholders	**$ 94**	$ (39)
Basic and diluted earnings (loss) per share	**$ 0.93**	$ (0.39)
Weighted-average common shares outstanding:		
Basic and diluted	**100.5**	100.5

The accompanying notes are an integral part of these condensed consolidated financial statements.

CVR ENERGY, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(unaudited)

(in millions, except share data)	Common Stockholders: Shares Issued	Common Stockholders: $0.01 Par Value Common Stock	Common Stockholders: Additional Paid-In Capital	Common Stockholders: Accumulated Deficit	Common Stockholders: Treasury Stock	Common Stockholders: Total CVR Stockholders' Equity	Noncontrolling Interest	Total Equity
Balance at December 31, 2021	100,629,209	$ 1	$ 1,510	$ (956)	$ (2)	$ 553	$ 217	$ 770
Distributions from CVR Partners to its public unitholders	**—**	**—**	**—**	**—**	**—**	**—**	**(36)**	**(36)**
Changes in equity due to CVR Partners' common unit repurchases	**—**	**—**	**(2)**	**—**	**—**	**(2)**	**(9)**	**(11)**
Other	**—**	**—**	**—**	**(1)**	**—**	**(1)**	**1**	**—**
Net income	**—**	**—**	**—**	**94**	**—**	**94**	**59**	**153**
Balance at March 31, 2022	**100,629,209**	**$ 1**	**$ 1,508**	**$ (863)**	**$ (2)**	**$ 644**	**$ 232**	**$ 876**

(in millions, except share data)	Common Stockholders: Shares Issued	Common Stockholders: $0.01 Par Value Common Stock	Common Stockholders: Additional Paid-In Capital	Common Stockholders: Accumulated Deficit	Common Stockholders: Treasury Stock	Common Stockholders: Total CVR Stockholders' Equity	Noncontrolling Interest	Total Equity
Balance at December 31, 2020	100,629,209	$ 1	$ 1,510	$ (490)	$ (2)	$ 1,019	$ 200	$ 1,219
Changes in equity due to CVR Partners' common unit repurchases	—	—	—	—	—	—	(1)	(1)
Other	—	—	—	1	—	1	—	1
Net loss	—	—	—	(39)	—	(39)	(16)	(55)
Balance at March 31, 2021	100,629,209	$ 1	$ 1,510	$ (528)	$ (2)	$ 981	$ 183	$ 1,164

The accompanying notes are an integral part of these condensed consolidated financial statements.

CVR ENERGY, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)

	Three Months Ended March 31,	
(in millions)	**2022**	**2021**
Cash flows from operating activities:		
Net income (loss)	**$ 153**	$ (55)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Depreciation and amortization	**67**	66
Gain on marketable securities	**—**	(62)
Deferred income taxes	**(4)**	(77)
Loss on extinguishment of debt	**1**	—
Share-based compensation	**25**	8
(Gain) loss on derivatives, net	**(6)**	43
Other items	**2**	2
Changes in assets and liabilities:		
Current assets and liabilities	**83**	175
Non-current assets and liabilities	**1**	(4)
Net cash provided by operating activities	**322**	96
Cash flows from investing activities:		
Capital expenditures	**(26)**	(34)
Turnaround expenditures	**(15)**	(1)
Acquisition of pipeline assets	**—**	(20)
Proceeds from sale of assets	**—**	1
Net cash used in investing activities	**(41)**	(54)
Cash flows from financing activities:		
Principal payments on senior secured notes	**(65)**	—
Repurchase of common units by CVR Partners	**(12)**	(1)
Distributions to CVR Partners' noncontrolling interest holders	**(36)**	—
Other financing activities	**(2)**	(1)
Net cash used in financing activities	**(115)**	(2)
Net increase in cash and cash equivalents and restricted cash	**166**	40
Cash, cash equivalents and restricted cash, beginning of period	**517**	674
Cash, cash equivalents and restricted cash, end of period	**$ 683**	$ 714

The accompanying notes are an integral part of these condensed consolidated financial statements.

NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(unaudited)

(1) Organization and Nature of Business

Organization

CVR Energy, Inc. ("CVR Energy," "CVR," "we," "us," "our," or the "Company") is a diversified holding company primarily engaged in the petroleum refining and nitrogen fertilizer manufacturing industries through its holdings in CVR Refining, LP (the "Petroleum Segment" or "CVR Refining") and CVR Partners, LP (the "Nitrogen Fertilizer Segment" or "CVR Partners"). CVR Refining is an independent petroleum refiner and marketer of high value transportation fuels. CVR Partners produces and markets nitrogen fertilizers in the form of urea ammonium nitrate ("UAN") and ammonia. CVR's common stock is listed on the New York Stock Exchange (the "NYSE") under the symbol "CVI." Icahn Enterprises L.P. and its affiliates ("IEP") owned approximately 71% of the Company's outstanding common stock as of March 31, 2022.

CVR Partners, LP

Interest Holders - As of March 31, 2022, public common unitholders held approximately 63% of CVR Partners' outstanding common units and CVR Services, LLC ("CVR Services"), a wholly owned subsidiary of CVR Energy, held approximately 37% of CVR Partners' outstanding common units. In addition, CVR Services held 100% of the interests in CVR Partners' general partner, CVR GP, LLC ("CVR GP"), which held a non-economic general partner interest in CVR Partners as of March 31, 2022. The noncontrolling interest reflected on the condensed consolidated balance sheets of CVR is only impacted by the net income of, and distributions from, CVR Partners.

Unit Repurchase Program - On May 6, 2020, CVR Partners announced that the board of directors of its general partner (the "UAN GP Board"), on behalf of CVR Partners, authorized a common unit repurchase program (the "Unit Repurchase Program"), which was increased on February 22, 2021. The Unit Repurchase Program, as increased, authorized CVR Partners to repurchase up to $20 million of its common units. During the three months ended March 31, 2022 and 2021, CVR Partners repurchased 111,695 and 24,378 common units, respectively, on the open market in accordance with a repurchase agreement under Rules 10b5-1 and 10b-18 of the Securities Exchange Act of 1934, as amended, at a cost of $12 million and $1 million, respectively, exclusive of transaction costs, or an average price of $110.98 and $21.69 per common unit, respectively. As of March 31, 2022, CVR Partners, considering all repurchases made since inception of the Unit Repurchase Program, had a nominal amount in authority remaining under the Unit Repurchase Program. This Unit Repurchase Program does not obligate CVR Partners to repurchase any common units and may be cancelled or terminated by the UAN GP Board at any time.

As a result of these repurchases, and the resulting change in CVR Energy's ownership of CVR Partners while maintaining control, CVR Energy recognized a decrease of $2 million to additional paid-in capital from the reduction of non-controlling interests totaling $3 million and a related reduction of a deferred tax liability totaling $1 million from changes in its book versus tax basis in CVR Partners as of March 31, 2022. CVR Energy recognized a nominal increase to additional paid-in capital from the non-cash reduction of non-controlling interests totaling $0.1 million and the recognition of a deferred tax liability totaling $0.1 million from changes in its book versus tax basis in CVR Partners as of December 31, 2021.

(2) Basis of Presentation

The accompanying condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") and in accordance with the rules and regulations of the Securities and Exchange Commission ("SEC"). These condensed consolidated financial statements should be read in conjunction with the December 31, 2021 audited consolidated financial statements and notes thereto included in CVR Energy's Annual Report on Form 10-K for the year ended December 31, 2021 (the "2021 Form 10-K").

Our condensed consolidated financial statements include the consolidated results of CVR Partners, which is defined as a variable interest entity.

In the opinion of the Company's management, the accompanying condensed consolidated financial statements reflect all adjustments that are necessary for fair presentation of the financial position and results of operations of the Company for the periods presented. Such adjustments are of a normal recurring nature, unless otherwise disclosed.

Certain reclassifications have been made within the condensed consolidated financial statements for prior periods to conform with current presentation.

The preparation of the condensed consolidated financial statements in conformity with GAAP requires management to make certain estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, and the disclosure of contingent assets and liabilities. Actual results could differ from those estimates. Results of operations and cash flows for the interim periods presented are not necessarily indicative of the results that will be realized for the year ending December 31, 2022 or any other interim or annual period.

(3) Recent Accounting Pronouncements and Accounting Changes

Recent Accounting Pronouncements** - **New Accounting Standards Issued But Not Yet Implemented

In March 2020, the Financial Accounting Standards Board ("FASB") issued Accounting Standard Update ("ASU") 2020-04, Reference Rate Reform (Topic 848). This ASU was issued because, by the end of 2022, banks will no longer be required to report information that is used to determine London Interbank Offered Rate ("LIBOR"), which is used globally by all types of entities. As a result, LIBOR could be discontinued, as well as other interest rates used globally. ASU 2020-04 provides companies with optional expedients for contract modifications under Topics 310, 470, 842, and 815-15, excluded components of certain hedging relationships, fair value hedges, and cash flow hedges, as well as certain exceptions, which are intended to help ease the potential accounting burden associated with transitioning away from these reference rates. In January 2021, the FASB issued ASU 2021-01, Reference Rate Reform (Topic 848), which clarifies certain optional expedients and exceptions for contract modifications and hedge accounting. Companies can apply the ASU immediately. However, the guidance will only be available for a limited time (generally through December 31, 2022). The Company is currently evaluating the impact of adopting this new accounting standard, but does not currently expect it to have a material impact on its consolidated financial statements and related disclosures.

(4) Inventories

Inventories consisted of the following:

(in millions)	**March 31, 2022**	December 31, 2021
Finished goods	**$ 256**	$ 215
Raw materials	**295**	177
In-process inventories	**51**	20
Parts, supplies and other	**81**	72
Total inventories	**$ 683**	$ 484

NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(unaudited)

(5) Property, Plant and Equipment

Property, plant and equipment consisted of the following:

(in millions)	March 31, 2022	December 31, 2021
Machinery and equipment	**$ 4,046**	$ 4,033
Buildings and improvements	**89**	88
ROU finance leases	**81**	81
Land and improvements	**71**	71
Furniture and fixtures	**37**	37
Construction in progress	**178**	142
Other	**14**	15
	4,516	4,467
Less: Accumulated depreciation and amortization	**(2,247)**	(2,194)
Total property, plant and equipment, net	**$ 2,269**	$ 2,273

On February 1, 2021, the Company completed a pipeline acquisition for total consideration of $23 million, which is accounted for as a business combination under Accounting Standards Codification ("ASC") 805. An intangible asset of $3 million was recognized in Other long-term assets related to acquired contracts that will be amortized in less than three years. The accounting for the business combination was finalized during January 2022.

As of March 31, 2022, the Company had not identified the existence of an impairment indicator for our long-lived asset groups as outlined under ASC 360.

(6) Leases

Lease Overview

We lease certain pipelines, storage tanks, railcars, office space, land, and equipment across our refining, fertilizer, and corporate operations. Most leases include one or more options to renew, with renewal terms that can extend the lease term from one to 20 years or more. The exercise of lease renewal options is at our sole discretion. Certain leases also include options to purchase the leased property. Certain of our lease agreements include rental payments which are adjusted periodically for factors such as inflation. Our lease agreements do not contain any material residual value guarantees or material restrictive covenants. Additionally, we do not have any material lessor or sub-leasing arrangements.

Balance Sheet Summary as of March 31, 2022 and December 31, 2021

The following tables summarize the right-of-use ("ROU") asset and lease liability balances for the Company's operating and finance leases at March 31, 2022 and December 31, 2021:

	March 31, 2022		December 31, 2021	
(in millions)	Operating Leases	Finance Leases	Operating Leases	Finance Leases
ROU assets, net				
Pipeline and storage	**$ 16**	**$ 22**	$ 17	$ 23
Railcars	**5**	**—**	6	—
Real estate and other	**13**	**17**	14	18
Lease liability				
Pipelines and storage	**$ 17**	**$ 34**	$ 17	$ 35
Railcars	**5**	**—**	6	—
Real estate and other	**13**	**19**	14	19

Lease Expense Summary for the Three Months Ended March 31, 2022 and 2021

We recognize lease expense on a straight-line basis over the lease term and short-term lease expense within Direct operating expenses (exclusive of depreciation and amortization). For the three months ended March 31, 2022 and 2021, we recognized lease expense comprised of the following components:

(in millions)	Three Months Ended March 31, 2022	Three Months Ended March 31, 2021
Operating lease expense	**$ 4**	$ 4
Finance lease expense:		
Amortization of ROU asset	**$ 2**	$ 2
Interest expense on lease liability	**1**	1
Short-term lease expense	**$ 2**	$ 2

Lease Terms and Discount Rates

The following outlines the remaining lease terms and discount rates used in the measurement of the Company’s ROU assets and liabilities:

	March 31, 2022		December 31, 2021	
	Operating Leases	Finance Leases	Operating Leases	Finance Leases
Weighted-average remaining lease term	**4.1 years**	**7.0 years**	4.1 years	7.2 years
Weighted-average discount rate	**5.3 %**	**9.0 %**	5.4 %	9.0 %

Maturities of Lease Liabilities

The following summarizes the remaining minimum lease payments through maturity of the Company’s lease liabilities at March 31, 2022:

(in millions)	Operating Leases	Finance Leases
Remainder of 2022	**$ 11**	**$ 9**
2023	**12**	**10**
2024	**8**	**10**
2025	**3**	**10**
2026	**1**	**10**
Thereafter	**4**	**23**
Total lease payments	**39**	**72**
Less: imputed interest	**(4)**	**(19)**
Total lease liability	**$ 35**	**$ 53**

On February 21, 2022, Coffeyville Resources Nitrogen Fertilizers, LLC (“CRNF”), a wholly owned subsidiary of CVR Partners, entered into the First Amendment to the On-Site Product Supply Agreement with Messer LLC (“Messer”), which amended the July 31, 2020 On-Site Product Supply Agreement (as amended, the “Messer Agreement”). Under the Messer Agreement, among other obligations, Messer is obligated to supply and make certain capital improvements during the term of the Messer Agreement, and CRNF is obligated to take as available and pay for, oxygen, nitrogen, and compressed dry air from Messer’s facility. This arrangement for CRNF’s purchase of oxygen, nitrogen, and dry air from Messer does not meet the definition of a lease under FASB ASC Topic 842, *Leases* (“Topic 842”), as CRNF does not expect to receive substantially all of the output of Messer’s on-site production from its air separation unit over the life of the Messer Agreement. The Messer Agreement also obligates Messer to install a new oxygen storage vessel, related equipment and infrastructure (“Oxygen Storage Vessel” or “Vessel”) to be used solely by the Coffeyville Fertilizer Facility. The arrangement for the use of the Oxygen Storage Vessel meets the definition of a lease under Topic 842, as CRNF will receive all output associated with the Vessel. Based on terms outlined in the Messer Agreement, the Company expects the lease of the Oxygen Storage Vessel to be classified as a

NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Continued)
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financing lease with an amount of approximately $25 million being capitalized upon lease commencement when the Vessel is placed in service.

(7) Other Current Liabilities

Other current liabilities were as follows:

(in millions)	March 31, 2022	December 31, 2021
Accrued Renewable Fuel Standards (“RFS”) obligation	**$ 585**	$ 494
Deferred revenue	**81**	87
Accrued taxes other than income taxes	**41**	45
Share-based compensation	**30**	15
Personnel accruals	**28**	46
Accrued interest	**19**	24
Operating lease liabilities	**12**	13
Accrued income taxes	**11**	—
Current portion of long-term debt and finance lease obligations	**6**	6
Accrued derivatives	**—**	2
Other accrued expenses and liabilities	**30**	15
Total other current liabilities	**$ 843**	$ 747

(8) Long-Term Debt and Finance Lease Obligations

Long-term debt and finance lease obligations consist of the following:

(in millions)	March 31, 2022	December 31, 2021
CVR Partners:		
9.25% Senior Secured Notes, due June 2023 (1)	**$ —**	$ 65
6.125% Senior Secured Notes, due June 2028	**550**	550
Unamortized discount and debt issuance costs	**(4)**	(4)
Total CVR Partners debt, net of current portion	**$ 546**	$ 611
CVR Refining:		
Finance lease obligations, net of current portion (2)	**47**	48
Total CVR Refining debt, net of current portion	**$ 47**	$ 48
CVR Energy:		
5.25% Senior Notes, due February 2025	**$ 600**	$ 600
5.75% Senior Notes, due February 2028	**400**	400
Unamortized debt issuance costs	**(4)**	(5)
Total CVR Energy debt	**996**	995
Total long-term debt and finance lease obligations, net of current portion	**$ 1,589**	$ 1,654
Current portion of long-term debt and finance lease obligations (2)	**6**	6
Total long-term debt and finance lease obligations, including current portion	**$ 1,595**	$ 1,660

(1) The $65 million outstanding balance of the 9.25% Senior Secured Notes, due June 2023 (the “2023 UAN Notes”) was paid in full on February 22, 2022 at par, plus accrued and unpaid interest.
(2) Current portion of finance lease obligations recognized was approximately $6 million as of March 31, 2022 and December 31, 2021. The current amounts are reported in Other current liabilities.

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Credit Agreements

(in millions)	Total Available Borrowing Capacity	Amount Borrowed as of March 31, 2022	Outstanding Letters of Credit	Available Capacity as of March 31, 2022	Maturity Date
CVR Partners:					
Asset Based (“Nitrogen Fertilizer ABL”) Credit Agreement (1)	$ **35**	$ **—**	$ **—**	$ **35**	September 30, 2024
CVR Refining:					
Amended and Restated Asset Based (“Petroleum ABL”) Credit Agreement (2)	$ **400**	$ **—**	$ **29**	$ **371**	November 14, 2022

(1) Beginning September 30, 2021, loans under the Nitrogen Fertilizer ABL bear interest at an annual rate equal to, at the option of the borrowers, (i) (a) 1.615% plus the daily simple Secured Overnight Financing Rate (“SOFR”) or (b) 0.615% plus a base rate, if CVR Partners’ quarterly excess availability is greater than or equal to 75%, (ii) (a) 1.865% plus SOFR or (b) 0.865% plus a base rate, if CVR Partners’ quarterly excess availability is greater than or equal to 50% but less than 75%, or (iii) (a) 2.115% plus SOFR or (b) 1.115% plus a base rate, otherwise.

(2) Loans under the Petroleum ABL bear interest at an annual rate equal to (i) (a) 1.50% plus LIBOR, to the extent available, or (b) 0.50% plus a base rate, if CVR Refining’s quarterly excess availability is greater than 50%, and (ii) (a) 1.75% plus LIBOR, to the extent available, or (b) 0.75% plus a base rate, otherwise.

CVR Partners

2023 UAN Notes - On February 22, 2022, CVR Partners redeemed all of the outstanding 2023 UAN Notes at par and settled accrued and unpaid interest of approximately $1 million through the date of redemption. As a result of this transaction, CVR Partners recognized a loss on extinguishment of debt of $1 million, which includes the write-off of unamortized deferred financing costs and discount of less than $1 million each.

CVR Refining

Petroleum ABL - On April 12, 2022, in connection with our Petroleum ABL, a new wholly owned subsidiary of CVR Energy, CVR Renewables, LLC (“CVR Renew”), delivered to Wells Fargo Bank, National Association, as administrative agent and collateral agent for the secured parties, a Joinder Agreement pursuant to which CVR Renew became a borrower for all purposes under the Petroleum ABL and other Credit Documents (as defined in the Petroleum ABL).

CVR Energy

2025 Notes and 2028 Notes - On April 12, 2022, in connection with our 5.25% Senior Notes, due 2025 (the “2025 Notes”) and the 5.75% Senior Notes, due 2028 (the “2028 Notes” and together with the 2025 Notes, the “Notes”), issued pursuant to the Indenture dated January 27, 2020, among CVR Energy, the subsidiary guarantors listed therein (collectively, the “Guarantors”), and Wells Fargo Bank, National Association, as trustee (the “Trustee”), CVR Renew, the Guarantors, and the Trustee executed and delivered a Supplemental Indenture pursuant to which CVR Renew unconditionally guaranteed all of the Company’s obligations under the Notes on the terms and conditions set forth in the Note Guarantee and the Indenture.

Covenant Compliance

The Company and its subsidiaries were in compliance with all covenants under their respective debt instruments as of March 31, 2022.

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(9) Revenue

The following tables present the Company's revenue, disaggregated by major product. The following tables also include a reconciliation of the disaggregated revenue with the Company's reportable segments.

	Three Months Ended March 31, 2022			
(in millions)	**Petroleum**	**Nitrogen Fertilizer**	**Other / Elimination**	**Consolidated**
Gasoline	**$ 1,104**	**$ —**	**$ —**	**$ 1,104**
Distillates [(1)]	**962**	**—**	**—**	**962**
Ammonia	**—**	**42**	**—**	**42**
UAN	**—**	**160**	**—**	**160**
Other urea products	**—**	**9**	**—**	**9**
Freight revenue	**4**	**9**	**—**	**13**
Other [(2)]	**78**	**3**	**(4)**	**77**
Revenue from product sales	**2,148**	**223**	**(4)**	**2,367**
Crude oil sales	**5**	**—**	**—**	**5**
Other revenue [(2)]	**1**	**—**	**—**	**1**
Total revenue	**$ 2,154**	**$ 223**	**$ (4)**	**$ 2,373**

	Three Months Ended March 31, 2021			
(in millions)	**Petroleum**	**Nitrogen Fertilizer**	**Other / Elimination**	**Consolidated**
Gasoline	$ 750	$ —	$ —	$ 750
Distillates [(1)]	587	—	—	587
Ammonia	—	10	—	10
UAN	—	38	—	38
Other urea products	—	5	—	5
Freight revenue	5	6	—	11
Other [(2)]	32	2	(2)	32
Revenue from product sales	1,374	61	(2)	1,433
Crude oil sales	29	—	—	29
Other revenue [(2)]	1	—	—	1
Total revenue	$ 1,404	$ 61	$ (2)	$ 1,463

(1) Distillates consist primarily of diesel fuel, kerosene, and jet fuel.
(2) Other revenue consists primarily of feedstock, asphalt sales, and pipeline and processing fees.

Transaction Price Allocated to Remaining Performance Obligations

As of March 31, 2022, the Nitrogen Fertilizer Segment had approximately $10 million of remaining performance obligations for contracts with an original expected duration of more than one year. The Nitrogen Fertilizer Segment expects to recognize approximately $6 million of these performance obligations as revenue by the end of 2022, an additional $4 million in 2023, and a nominal amount thereafter.

Contract Balances

The Nitrogen Fertilizer Segment's deferred revenue is a contract liability that primarily relates to nitrogen fertilizer sales contracts requiring customer prepayment prior to product delivery to guarantee a price and supply of nitrogen fertilizer. A summary of the Nitrogen Fertilizer Segment's deferred revenue activity during the three months ended March 31, 2022 is presented below:

(in millions)		
Balance at December 31, 2021	**$**	**87**
Add:		
New prepay contracts entered into during the period [1]		**15**
Less:		
Revenue recognized that was included in the contract liability balance at the beginning of the period		**(17)**
Revenue recognized related to contracts entered into during the period		**(4)**
Balance at March 31, 2022	**$**	**81**

(1) Includes $14 million where payment associated with prepaid contracts was collected as of March 31, 2022.

(10) Derivative Financial Instruments, Investments and Fair Value Measurements

Derivative Financial Instruments

Our segments are subject to price fluctuations caused by supply conditions, weather, economic conditions, interest rate fluctuations, and other factors. To manage price risk on crude oil and other inventories and to fix margins on certain future production, the Petroleum Segment from time to time enters into various commodity derivative transactions. On a regular basis, the Company enters into commodity contracts with counterparties for the purchases or sale of crude oil, blendstocks, various finished products, and RINs. The contracts usually qualify for the normal purchase normal sale exception and follow the accrual method of accounting. All other derivative instruments are recorded at fair value using mark-to-market accounting on a periodic basis utilizing third-party pricing.

The Petroleum Segment holds derivative instruments, such as exchange-traded crude oil futures and over-the-counter forward swap agreements, which it believes provide an economic hedge on future transactions, but such instruments are not designated as hedges under GAAP. There are no premiums paid or received at inception of the derivative contracts or upon settlement. The Petroleum Segment may enter into forward purchase or sale contracts associated with RINs. As of March 31, 2022, the Petroleum Segment had open fixed-price commitments to purchase a net 1 million RINs.

Commodity derivatives include commodity swaps and forward purchase and sale commitments. There were 1 million barrels in outstanding commodity swap positions as of March 31, 2022. There were approximately 1 million barrels in forward purchase commitments and less than 1 million barrels in forward sale commitments as of March 31, 2022.

The following outlines the gains (losses) recognized on the Company's derivative activities, all of which are recorded in Cost of materials and other on the condensed consolidated statements of operations:

	Three Months Ended March 31,			
(in millions)	**2022**		**2021**	
Forward purchases and sales contracts, net	**$**	**9**	$	18
Commodity swap instruments		**2**		(50)
Futures contracts		**(9)**		—
Total gain (loss) on derivatives, net	**$**	**2**	$	(32)

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Offsetting Assets and Liabilities

The Company elected to offset the fair value amounts recognized for multiple derivative contracts executed with the same counterparty. These amounts are recognized as current assets and current liabilities within the Prepaid expenses and other current assets and Other current liabilities financial statement line items, respectively, in the condensed consolidated balance sheets as follows:

	Derivative Assets		Derivative Liabilities	
(in millions)	March 31, 2022	December 31, 2021	March 31, 2022	December 31, 2021
Commodity derivatives	**$ 13**	$ 5	**$ —**	$ (7)
Less: Counterparty netting	**—**	(5)	**—**	5
Total net fair value of derivatives	**$ 13**	$ —	**$ —**	$ (2)

Investments

Investments consist of equity securities, which are reported at fair value in our condensed consolidated balance sheets. These investments are considered trading securities. Investment income on marketable securities consists of the following:

	Three Months Ended March 31,	
(in millions)	2022	2021
Gain on marketable securities	**$ —**	$ 62
Investment income on marketable securities	**$ —**	$ 62

On January 18, 2022, the Company divested its remaining nominal investment in Delek US Holdings, Inc. ("Delek"). As of March 31, 2022, the Company did not hold any investment in Delek.

Fair Value Measurements

In accordance with FASB ASC Topic 820 — *Fair Value Measurements and Disclosures* ("ASC 820"), the Company utilizes the market approach to measure fair value for its financial assets and liabilities. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable assets, liabilities or a group of assets or liabilities, such as a business.

ASC 820 utilizes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The following is a brief description of those three levels:

- Level 1 — Quoted prices in active markets for identical assets or liabilities
- Level 2 — Other significant observable inputs (including quoted prices in active markets for similar assets or liabilities)
- Level 3 — Significant unobservable inputs (including the Company's own assumptions in determining the fair value)

The following tables set forth the assets and liabilities measured or disclosed at fair value on a recurring basis, by input level, as of March 31, 2022 and December 31, 2021:

	March 31, 2022			
(in millions)	Level 1	Level 2	Level 3	Total
Location and description				
Other current assets (commodity derivatives)	**$ —**	**$ 13**	**$ —**	**$ 13**
Total assets	**$ —**	**$ 13**	**$ —**	**$ 13**
Other current liabilities (RFS obligations)	**$ —**	**$ (585)**	**$ —**	**$ (585)**
Long-term debt and finance lease obligations, net of current portion (long-term debt)	**—**	**(1,512)**	**—**	**(1,512)**
Total liabilities	**$ —**	**$ (2,097)**	**$ —**	**$ (2,097)**

NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Continued)
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	December 31, 2021			
(in millions)	Level 1	Level 2	Level 3	Total
Location and description				
Other current assets (commodity derivatives)	$ —	$ 1	$ —	$ 1
Total assets	$ —	$ 1	$ —	$ 1
Other current liabilities (commodity derivatives)	$ —	$ (2)	$ —	$ (2)
Other current liabilities (RFS obligations)	—	(494)	—	(494)
Long-term debt and finance lease obligations, net of current portion (long-term debt)	—	(1,620)	—	(1,620)
Total liabilities	$ —	$ (2,116)	$ —	$ (2,116)

As of March 31, 2022 and December 31, 2021, the only financial assets and liabilities that are measured at fair value on a recurring basis are the Company's investments, derivative instruments, long-term debt, and the RFS obligations. The estimated fair value of cash equivalents, including amounts invested in short-term money market funds, and restricted cash approximate their carrying amounts. The Petroleum Segment's commodity derivative contracts and RFS obligation, which use fair value measurements and are valued using broker quoted market prices of similar instruments, are considered Level 2 inputs. The Company had no transfers of assets or liabilities between any of the above levels during the three months ended March 31, 2022.

(11) Share-Based Compensation

A summary of compensation expense during the three months ended March 31, 2022 and 2021 is presented below:

	Three Months Ended March 31,	
(in millions)	2022	2021
Performance Unit Awards	**$ —**	$ (3)
CVR Partners - Phantom Unit Awards	**14**	4
Incentive Unit Awards	**11**	7
Total share-based compensation expense	**$ 25**	$ 8

(12) Commitments and Contingencies

Except as described below, there have been no material changes in the Company's commitments and contingencies disclosed in the 2021 Form 10-K. In the ordinary course of business, the Company may become party to lawsuits, administrative proceedings, and governmental investigations, including environmental, regulatory, and other matters. The outcome of these matters cannot always be predicted accurately, but the Company accrues liabilities for these matters if the Company has determined that it is probable a loss has been incurred and the loss can be reasonably estimated. While it is not possible to predict the outcome of such proceedings, if one or more of them were decided against us, the Company believes there would be no material impact on its consolidated financial statements.

The Company continues to monitor its contractual arrangements and customer, vendor, and supplier relationships to determine whether and to what extent, if any, the impacts of the COVID-19 pandemic, the Russia-Ukraine conflict, or ongoing crude oil or refined product price volatility will impair or excuse the performance of the Company or its subsidiaries or their customers, vendors, or suppliers under existing agreements. As of March 31, 2022, the Company had not experienced a material financial impact from any actual or threatened impairment of or excuse in its or others' performance under such agreements.

Crude Oil Supply Agreement

Effective on August 4, 2021, an indirect, wholly owned subsidiary of CVR Refining entered into the Second Amended and Restated Crude Oil Supply Agreement (the "2021 Supply Agreement") with Vitol Inc. ("Vitol") which superseded, in its entirety, the August 31, 2012 Amended and Restated Crude Oil Supply Agreement (the "2012 Supply Agreement" and collectively with the 2021 Supply Agreement, the "Crude Oil Supply Agreement") between the parties. The 2021 Supply Agreement is on substantially similar terms as the 2012 Supply Agreement, other than revisions to certain inventory turnover and insurance provisions. Under the Crude Oil Supply Agreement, Vitol supplies the Petroleum Segment with crude oil and intermediation logistics helping to reduce the amount of inventory held at certain locations and mitigate crude oil pricing risk. Volumes contracted under the Crude Oil Supply Agreement, as a percentage of the total crude oil purchases (in barrels), were approximately 39% and 37% for the three months ended March 31, 2022 and 2021, respectively. The Crude Oil Supply Agreement, which currently extends through December 31, 2022, automatically renews for successive one-year terms (each such term, a "Renewal Term") unless either party provides the other with notice of non-renewal at least 180 days prior to expiration of the term or any Renewal Term.

Renewable Fuel Standards

The Company's Petroleum Segment is subject to the RFS, implemented by the Environmental Protection Agency (the "EPA"), which requires refiners to either blend renewable fuels into their transportation fuels or purchase renewable fuel credits, known as RINs, in lieu of blending. The Petroleum Segment is not able to blend the substantial majority of its transportation fuels and must either purchase RINs on the open market or obtain waiver credits for cellulosic biofuels, or other exemptions from the EPA, in order to comply with the RFS.

For the three months ended March 31, 2022 and 2021, the Company recognized an expense of approximately $107 million and $178 million, respectively, for the Petroleum Segment's compliance with the RFS (based on the 2020 renewable volume obligation ("RVO") and proposed preliminary 2021 and 2022 RVO range, for the respective periods, excluding the impacts of any exemptions or waivers to which the Petroleum Segment may be entitled). The recognized amounts are included within Cost of materials and other in the condensed consolidated statements of operations and represent costs to comply with the RFS obligation through purchasing of RINs not otherwise reduced by blending of ethanol or biodiesel. At each reporting period, to the extent RINs purchased and generated through blending are less than the RFS obligation (excluding the impact of exemptions or waivers to which the Petroleum Segment may be entitled), the remaining position is marked-to-market using RIN market prices at period end. As of March 31, 2022 and December 31, 2021, the Petroleum Segment's RFS position was approximately $585 million and $494 million, respectively, which is recorded in Other current liabilities in the condensed consolidated balance sheets.

Litigation

The U.S. Attorney's office for the Southern District of New York contacted CVR Energy in September 2017 seeking production of information pertaining to CVR Refining's, CVR Energy's and Mr. Carl C. Icahn's activities relating to the RFS and Mr. Icahn's former role as an advisor to former President Trump. CVR Energy cooperated with the request and provided information in response to the subpoena. The U.S. Attorney's office has not made any claims or allegations against CVR Energy or Mr. Icahn. CVR Energy believes it maintains a strong compliance program and, while no assurances can be made, CVR Energy does not believe this inquiry will have a material impact on its business, financial condition, results of operations or cash flows.

Call Option Lawsuits – The Company continues to engage in post-trial proceedings relating to the lawsuits filed in 2019 against the Company, CVR Refining and its general partner, CVR Refining Holdings, IEP, and certain directors and affiliates (collectively, the “Call Defendants”) in the Delaware Court of Chancery by purported former unitholders of CVR Refining, on behalf of themselves and an alleged class of similarly situated unitholders relating to the Company’s exercise of the call option (“Call Option”) under the CVR Refining Amended and Restated Agreement of Limited Partnership assigned to it by CVR Refining’s general partner (collectively, the “Call Option Lawsuits”), which Call Option Lawsuits primarily allege breach of contract, tortious interference and breach of the implied covenant of good faith and fair dealing and seek monetary damages and attorneys’ fees, among other remedies. The plaintiffs filed their Opening Post-Trial Brief on December 22, 2021, now quantifying alleged damages in excess of $300 million. The Call Defendants filed their Post-Trial Answering Brief on February 22, 2022, and the plaintiffs filed their Reply Post-Trial Brief on April 1, 2022. The Call Defendants strongly dispute the plaintiffs’ claims. Accordingly, the Company cannot determine at this time the outcome of the Call Option Lawsuits. However, while we firmly believe the Call Option Lawsuits are without merit, if concluded in a manner adverse to the Company, they could have a material effect on the Company’s financial position, results of operations, or cash flows.

The lawsuits relating to insurance coverage for the Call Option Lawsuits, one filed on January 27, 2021, in the 434th Judicial District Court of Fort Bend County, Texas by the Call Defendants’ primary and excess insurers (the “Insurers”) seeking a declaratory judgment determining that they owe no indemnity coverage for the Call Option Lawsuits in relation to insurance policies that have coverage limits of $50 million, and another filed on January 30, 2022, in the Superior Court of the State of Delaware by the Call Defendants against the Insurers for anticipatory breach of contract and breach of the implied covenant of good faith and fair dealing (the “Delaware Coverage Case”), remain pending, and pre-trial proceedings are in process. As both lawsuits are in their early stages, the Company cannot determine at this time the outcome of these lawsuits, including whether the outcome would have a material impact on the Company’s financial position, results of operations, or cash flows.

RFS Disputes – The EPA has yet to respond to Wynnewood Refining Company, LLC’s (“WRC”) September 15, 2021, demand that the EPA return the status of WRC’s 2017 small refinery exemption (“SRE”) to “granted” following the June 25, 2021, decision of the Supreme Court of the United States overturning a decision of the 10th Circuit Court of Appeals (the “10th Circuit”) vacating three SREs under the RFS, including one issued to the Wynnewood Refinery for 2017, to the extent such SREs were vacated based on failure to have continuously received an SRE in all applicable preceding years, as well as the subsequent actions by the 10th Circuit vacating its prior judgment, recalling its previous mandate denying WRC’s 2017 SRE, entering into a new judgment, issuing a new mandate transferring jurisdiction back to the EPA, and denying the EPA’s Motion for Clarification. Given the EPA’s failure to respond, we cannot currently estimate the outcome, impact or timing of resolution of this matter.

On April 7, 2022, the EPA notified WRC that it was denying WRC’s SRE for 2018, despite having previously granted such SRE and despite litigation by WRC against the EPA for damages WRC sustained in connection with EPA’s failure to rule on its SRE within the time period required under the RFS. The EPA is not requiring 31 small refineries, including WRC, to purchase or redeem additional RFS credits as a result of its denial. The Company is evaluating its response to the EPA’s actions relating to WRC’s 2018 SRE. The Company continues to urge the EPA to reconsider its Proposed RFS Small Refinery Exemption Decision dated December 7, 2021 (the “Proposed Denial”), in which the EPA announced its intention to change its statutory interpretation of the Federal Clean Air Act (“CAA”) and deny 65 pending SRE petitions, including those submitted by WRC for 2019, 2020, and 2021, and expects to file litigation against the EPA should it finalize its Proposed Denial. Given the early stages of these matters, the Company cannot determine at this time the outcomes of these matters. However, while we firmly believe the EPA’s actions are unlawful and violate the RFS, and while we intend to pursue all available legal remedies, if these matters are ultimately concluded in a manner adverse to the Company, they could have a material effect on the Company’s financial position, results of operations, or cash flows.

Environmental, Health, and Safety (“EHS”) Matters

Clean Air Act Matter - On March 30, 2022, the United States District Court for the District of Kansas (“D. Kan.”) denied CRRM’s petition for judicial review of approximately $6.8 million in stipulated penalties (the “Stipulated Claims”) being sought by the United States (on behalf of the EPA) and the State of Kansas, through the Kansas Department of Health and Environment (“KDHE”) in connection with their allegations that CRRM violated the CAA and a 2012 Consent Decree (the “CD”) between CRRM, the United States (on behalf of the EPA) and KDHE at CRRM’s Coffeyville refinery, primarily relating to flares. CRRM previously deposited funds into a commercial escrow account relating to the Stipulated Claims, and is currently evaluating its response to this denial, including its appeal rights. The escrowed funds are legally restricted for use and are included within Prepaid expenses and other current assets on the condensed consolidated balance sheets.

On March 21, 2022, CRRM filed a Motion to Dismiss certain claims in the first amended supplemental complaint filed by United States (on behalf of the EPA) and KDHE on February 17, 2022, alleging violations of the CAA, the Kansas State Implementation Plan, Kansas law, 40 C.F.R. Part 63 and CRRM’s permits relating to flares, heaters, and related matters and seeking civil penalties, injunctive and related relief (collectively, the “Statutory Claims”). CRRM’s Motion to Dismiss remains pending before the D. Kan. As negotiations and proceedings relating to the Stipulated Claims and the Statutory Claims are ongoing, the Company cannot determine at this time the outcome of these matters, including whether such outcome, or any subsequent enforcement or litigation relating thereto would have a material impact on the Company’s financial position, results of operations, or cash flows.

(13) Business Segments

CVR Energy’s revenues are derived from two operating segments: the Petroleum Segment and the Nitrogen Fertilizer Segment. The Company evaluates the performance of its segments based primarily on segment operating income (loss) and

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Earnings Before Interest, Taxes, Depreciation, and Amortization ("EBITDA"). For the purposes of the operating segment disclosure, the Company presents operating income (loss) as it is the most comparable measure to the amounts presented on the condensed consolidated statements of operations. The other amounts reflect intercompany eliminations, corporate cash and cash equivalents, income tax activities, and other corporate activities that are not allocated to the operating segments.

The following table summarizes certain operating results and capital expenditures information by segment:

	Three Months Ended March 31,	
(in millions)	**2022**	**2021**
Net sales:		
Petroleum	**$ 2,154**	$ 1,404
Nitrogen Fertilizer	**223**	61
Other, including intersegment eliminations	**(4)**	(2)
Total net sales	**$ 2,373**	$ 1,463
Operating income (loss):		
Petroleum	**$ 130**	$ (115)
Nitrogen Fertilizer	**104**	(14)
Other, including intersegment eliminations [1]	**(14)**	(6)
Total operating income (loss)	**220**	(135)
Interest expense, net	**(24)**	(31)
Investment income on marketable securities	**—**	62
Other (expense) income, net	**(9)**	7
Income (loss) before income tax expense	**$ 187**	$ (97)
Depreciation and amortization:		
Petroleum	**$ 46**	$ 51
Nitrogen Fertilizer	**19**	14
Other [1]	**2**	1
Total depreciation and amortization	**$ 67**	$ 66
Capital expenditures: [2]		
Petroleum	**$ 19**	$ 10
Nitrogen Fertilizer	**5**	3
Other [1]	**26**	55
Total capital expenditures	**$ 50**	$ 68

The following table summarizes total assets by segment:

(in millions)	**March 31, 2022**	**December 31, 2021**
Petroleum	**$ 3,874**	$ 3,368
Nitrogen Fertilizer	**1,103**	1,127
Other, including intersegment eliminations [1]	**(632)**	(589)
Total assets	**$ 4,345**	$ 3,906

(1) Other includes amounts for the Wynnewood renewable diesel unit project.
(2) Capital expenditures are shown exclusive of capitalized turnaround expenditures and business combinations.

(14) Supplemental Cash Flow Information

Cash flows related to income taxes, interest, leases, capital expenditures and deferred financing costs included in accounts payable, and non-cash dividends were as follows:

(in millions)	Three Months Ended March 31, 2022	Three Months Ended March 31, 2021
Supplemental disclosures:		
Cash paid for interest	**$ 30**	$ 29
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	**$ 4**	$ 4
Operating cash flows from finance leases	**1**	1
Financing cash flows from finance leases	**1**	1
Non-cash investing and financing activities:		
Change in capital expenditures included in accounts payable [(1)]	**$ 24**	$ 34
Change in turnaround expenditures included in accounts payable	**49**	—

(1) Capital expenditures are shown exclusive of capitalized turnaround expenditures.

Cash, cash equivalents and restricted cash consisted of the following:

(in millions)	March 31, 2022	December 31, 2021
Cash and cash equivalents	**$ 676**	$ 510
Restricted cash [(1)]	**7**	7
Cash, cash equivalents and restricted cash	**$ 683**	$ 517

(1) The restricted cash balance is included within Prepaid expenses and other current assets on the condensed consolidated balance sheets.

(15) Related Party Transactions

Activity associated with the Company's related party arrangements for the three months ended March 31, 2022 and 2021 is summarized below:

Expenses from Related Parties

(in millions)	Three Months Ended March 31, 2022	Three Months Ended March 31, 2021
Cost of materials and other:		
Enable Joint Venture Transportation Agreement	**$ 2**	$ 3

Corporate Master Service Agreement

On April 12, 2022, in connection with our Corporate Master Service Agreement effective January 1, 2020, by and among our wholly owned subsidiary, CVR Services, and certain other of our subsidiaries, including but not limited to CVR Partners and its subsidiaries, pursuant to which CVR Services provides the service recipients thereunder with management and other professional services (the "Corporate MSA"), 18 indirect, wholly owned subsidiaries of CVR Energy, including but not limited to CVR Renew, were joined as service recipients under the Corporate MSA.

Dividends to CVR Energy Stockholders

Dividends, if any, including the payment, amount and timing thereof, are determined in the discretion of CVR Energy's board of directors (the "Board"). IEP, through its ownership of the Company's common stock, is entitled to receive dividends that are declared and paid by the Company based on the number of shares held at each record date. No dividends were declared or paid during the first quarter of 2022 related to the fourth quarter of 2021, and there were no quarterly dividends declared or paid during 2021 related to the first, second, and third quarters of 2021 and fourth quarter of 2020.

On May 26, 2021, the Company announced a special dividend of approximately $492 million, or equivalent to $4.89 per share of the Company's common stock, to be paid in a combination of cash (the "Cash Distribution") and the common stock of Delek held by the Company (the "Stock Distribution"). On June 10, 2021, the Company distributed an aggregate amount of approximately $241 million, or $2.40 per share of the Company's common stock, pursuant to the Cash Distribution, and approximately 10,539,880 shares of Delek common stock, which represented approximately 14.3% of the outstanding shares of Delek common stock, pursuant to the Stock Distribution. IEP received approximately 7,464,652 shares of common stock of Delek and $171 million in cash. The Stock Distribution was recorded as a reduction to equity through a derecognition of our investment in Delek, and the Company recognized a gain of $112 million from the initial investment in Delek through the date of the Stock Distribution.

For the first quarter of 2022, the Company, upon approval by the Company's Board of Directors on May 2, 2022, declared a cash dividend of $0.40 per share, or $40 million, which is payable May 23, 2022 to shareholders of record as of May 13, 2022. Of this amount, IEP will receive $28 million due to its ownership interest in the Company's shares.

Distributions to CVR Partners' Unitholders

Distributions, if any, including the payment, amount and timing thereof, are subject to change at the discretion of the UAN GP Board. The following table presents distributions paid by CVR Partners to its unitholders, including amounts received by the Company, during 2022 and 2021 (amounts presented in tables below may not add to totals presented due to rounding).

			Distributions Paid *(in millions)*		
Related Period	**Date Paid**	**Distributions Per Common Unit**	**Public Unitholders**	**CVR Energy**	**Total**
2021 - 4th Quarter	March 14, 2022	$ 5.24	$ 36	$ 20	$ 56

			Distributions Paid *(in millions)*		
Related Period	**Date Paid**	**Distributions Per Common Unit**	**Public Unitholders**	**CVR Energy**	**Total**
2021 - 2nd Quarter	August 23, 2021	$ 1.72	$ 11	$ 7	$ 18
2021 - 3rd Quarter	November 22, 2021	2.93	20	11	31
Total distributions		$ 4.65	$ 31	$ 18	$ 50

There were no distributions declared or paid by CVR Partners related to the first quarter of 2021 and fourth quarter of 2020.

For the first quarter of 2022, CVR Partners, upon approval by the UAN GP Board on May 2, 2022, declared a distribution of $2.26 per common unit, or $24 million, which is payable May 23, 2022 to unitholders of record as of May 13, 2022. Of this amount, CVR Energy will receive approximately $9 million, with the remaining amount payable to public unitholders.

Item 2. ***Management's Discussion and Analysis of Financial Condition and Results of Operations***

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our Annual Report on Form 10-K for the year ended December 31, 2021 filed with the SEC on February 23, 2022 (the "2021 Form 10-K"), and the unaudited condensed consolidated financial statements and related notes and with the statistical information and financial data appearing in this Report. Results of operations for the three months ended March 31, 2022 and cash flows for the three months ended March 31, 2022 are not necessarily indicative of results to be attained for any other period. See "Important Information Regarding Forward-Looking Statements."

Reflected in this discussion and analysis is how management views the Company's current financial condition and results of operations, along with key external variables and management's actions that may impact the Company. Understanding significant external variables, such as market conditions, weather, and seasonal trends, among others, and management actions taken to manage the Company, address external variables, among others, will increase users' understanding of the Company, its financial condition and results of operations. This discussion may contain forward-looking statements that reflect our plans, estimates and beliefs. Our actual results could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed below and elsewhere in this Report.

Company Overview

CVR Energy, Inc. ("CVR Energy," "CVR," "we," "us," "our," or the "Company") is a diversified holding company primarily engaged in the petroleum refining and nitrogen fertilizer manufacturing industries through our holdings in CVR Refining, LP ("CVR Refining") and CVR Partners, LP ("CVR Partners"), respectively. CVR Refining is a refiner that does not have crude oil exploration or production operations (an "independent petroleum refiner") and is a marketer of high value transportation fuels. CVR Partners produces and markets nitrogen fertilizers in the form of ammonia and urea ammonium nitrate ("UAN"). Ammonia is a direct application fertilizer and is primarily used as a building block for other nitrogen products for industrial applications and finished fertilizer products. UAN is an aqueous solution of urea and ammonium nitrate. At March 31, 2022, we owned the general partner and approximately 37% of the outstanding common units representing limited partner interests in CVR Partners. As of March 31, 2022, Icahn Enterprises L.P. and its affiliates ("IEP") owned approximately 71% of our outstanding common stock.

We operate under two business segments: petroleum and nitrogen fertilizer, which are referred to in this document as our "Petroleum Segment" and our "Nitrogen Fertilizer Segment," respectively.

On February 22, 2022, in connection with our focus on decarbonization, we announced that our board of directors (the "Board") had approved a plan to restructure our business to segregate our renewables business. As part of this restructuring, in the first quarter of 2022, we formed 16 new indirect, wholly owned subsidiaries ("NewCos") of CVR Energy, and in April 2022, joined our indirect, wholly owned subsidiary, CVR Renewables, LLC ("CVR Renew") to our Amended and Restated Asset Based Credit Agreement (the "Petroleum ABL"), and executed a Supplemental Indenture in connection with our 5.25% Senior Notes, due 2025 (the "2025 Notes") and the 5.75% Senior Notes, due 2028 (the "2028 Notes" and together with the 2025 Notes, the "Notes"), pursuant to which CVR Renew unconditionally guaranteed all of the Company's obligations under the Notes and the Indenture dated January 27, 2020. In addition, in April 2022, in connection with our Corporate Master Service Agreement effective January 1, 2020, by and among our wholly owned subsidiary, CVR Services, LLC ("CVR Services"), and certain other of our subsidiaries, including but not limited to CVR Partners and its subsidiaries, pursuant to which CVR Services provides the service recipients thereunder with management and other professional services (the "Corporate MSA"), 18 indirect, wholly owned subsidiaries of CVR Energy, including but not limited to CVR Renew, were joined as service recipients under the Corporate MSA. Over the coming year, the Company intends to evaluate the transfer of certain assets to these NewCos to, among other purposes, better align our organizational structure with management, financial reporting, and our goal to maximize our renewables focus. At the present time, we expect the restructuring to be completed during the first quarter of 2023.

Strategy and Goals

The Company has adopted Mission and Values, which articulate the Company's expectations for how it and its employees do business each and every day.

Mission and Core Values

Our Mission is to be a top tier North American renewable fuels, petroleum refining, and nitrogen-based fertilizer company as measured by safe and reliable operations, superior performance and profitable growth. The foundation of how we operate is built on five core Values:

- *Safety* - We always put safety first. The protection of our employees, contractors and communities is paramount. We have an unwavering commitment to safety above all else. If it’s not safe, then we don’t do it.

- *Environment* - We care for our environment. Complying with all regulations and minimizing any environmental impact from our operations is essential. We understand our obligation to the environment and that it’s our duty to protect it.

- *Integrity* - We require high business ethics. We comply with the law and practice sound corporate governance. We only conduct business one way—the right way with integrity.

- *Corporate Citizenship* - We are proud members of the communities where we operate. We are good neighbors and know that it’s a privilege we can’t take for granted. We seek to make a positive economic and social impact through our financial donations and the contributions of time, knowledge and talent of our employees to the places where we live and work.

- *Continuous Improvement* - We believe in both individual and team success. We foster accountability under a performance-driven culture that supports creative thinking, teamwork, diversity and personal development so that employees can realize their maximum potential. We use defined work practices for consistency, efficiency and to create value across the organization.

Our core values are driven by our people, inform the way we do business each and every day and enhance our ability to accomplish our mission and related strategic objectives.

Strategic Objectives

We have outlined the following strategic objectives to drive the accomplishment of our mission:

Environmental Health & Safety (“EH&S”) - We aim to achieve continuous improvement in all EH&S areas through ensuring our people’s commitment to environmental, health and safety comes first, the refinement of existing policies, continuous training, and enhanced monitoring procedures.

Reliability - Our goal is to achieve industry-leading utilization rates at our facilities through safe and reliable operations. We are focusing on improvements in day-to-day plant operations, identifying alternative sources for plant inputs to reduce lost time due to third-party operational constraints, and optimizing our commercial and marketing functions to maintain plant operations at their highest level.

Market Capture - We continuously evaluate opportunities to improve the facilities’ realized pricing at the gate and reduce variable costs incurred in production to maximize our capture of market opportunities.

Financial Discipline - We strive to be as efficient as possible by maintaining low operating costs and disciplined deployment of capital.

Achievements

During the first three months of 2022, we successfully executed a number of achievements in support of our strategic objectives shown below through the date of this filing:

	Safety	Reliability	Market Capture	Financial Discipline
Achieved reductions in process safety management tier 1 incidents and total recordable incident rate of 53% and 100%, respectively, compared to the first three months of 2021	ü			
Declared a dividend of $0.40 per share related to the first three months of 2022 to be paid in May 2022			ü	ü
Received Board approval for a comprehensive plan to restructure our business to segregate our renewables operations			ü	ü
Petroleum Segment:				
Achieved reduction in total recordable incident rate of 100% compared to the first three months of 2021	ü			
Operated our refineries safely and reliably	ü	ü	ü	
Began the planned turnaround at the Wynnewood Refinery as expected in late February 2022	ü	ü		
Nitrogen Fertilizer Segment:				
Achieved reductions in environmental events, process safety management tier 1 incidents and total recordable incident rate of 50%, 100% and 100%, respectively, compared to the first three months of 2021	ü			
Operated both fertilizer facilities safely	ü			
Achieved record UAN production volumes at the Coffeyville Fertilizer Facility in March 2022		ü	ü	
Declared cash distribution of $2.26 per common unit related to the first three months of 2022 to be paid in May 2022			ü	ü
Completed CVR Partners' targeted $95 million debt reduction plan with the repayment of the remaining $65 million balance of its 9.25% Senior Secured Notes, due 2023 (the "2023 UAN Notes") in the first quarter of 2022 for a total reduction in annual cash interest expense of approximately $9 million				ü
Repurchased over 111,000 CVR Partners common units for $12 million				ü

Industry Factors and Market Indicators

General Business Environment

COVID-19 - Throughout 2020 and into 2021, the COVID-19 pandemic impacted the worldwide economy, financial markets, and the energy and fertilizer industries. Actions taken by the U.S. government to provide stimulus to individuals and businesses helped mitigate the impacts of the downturn caused by COVID-19, and we continue to see businesses resuming operations and the lifting of governmental restrictions. However, despite worldwide advances in the containment of the virus and economic market recovery in 2021 and 2022, COVID-19 remains a dynamic and continuously evolving situation with unknown short and long-term economic challenges that could reverse any recent improvements. Further, the spread of variants of COVID-19 could cause restrictions to be reinstated, and the extent to which the pandemic may impact our business, financial condition, liquidity, or results of operations cannot be determined at this time.

Russia-Ukraine Conflict - In February 2022, Russia invaded Ukraine, disrupting the global oil, fertilizer, and agriculture markets, and leading to heightened uncertainty in the worldwide economy recovering from the COVID-19 pandemic. In response, many Western countries have formally or informally adopted sanctions on a number of Russian exports, including Russian oil and natural gas, and individuals affiliated with Russian government leadership. These sanctions, thus far, have resulted in higher oil prices, continued elevation of natural gas prices, and will continue to impact commodity prices in the near-term, which could have a material effect on our financial condition, cash flows, or results of operations. The ultimate outcome of the Russia-Ukraine conflict and any associated market disruptions are difficult to predict and may materially affect our business, operations, and cash flows in unforeseen ways.

Petroleum Segment

The earnings and cash flows of the Petroleum Segment are primarily affected by the relationship between refined product prices and the prices for crude oil and other feedstocks that are processed and blended into refined products together with the ever escalated cost of refinery compliance. The cost to acquire crude oil and other feedstocks and the price for which refined products are ultimately sold depends on factors beyond the Petroleum Segment's control, including the supply of, and demand for crude oil, as well as gasoline and other refined products which, in turn, depend on, among other factors, changes in domestic and foreign economies, driving habits, weather conditions, domestic and foreign political affairs, production levels, the availability of imports, the marketing of competitive fuels, and the extent of government regulation. Because the Petroleum Segment applies first-in first-out accounting to value its inventory, crude oil price movements may impact net income because of changes in the value of its unhedged inventory. The effect of changes in crude oil prices on the Petroleum Segment results of operations is partially influenced by the rate at which the processing of refined products adjusts to reflect these changes.

The prices of crude oil and other feedstocks and refined products are also affected by other factors, such as product pipeline capacity, system inventory, local and regional market conditions, inflation, and the operating levels of other refineries. Crude oil costs and the prices of refined products have historically been subject to wide fluctuations. Widespread expansion or upgrades of third party facilities, price volatility, international political and economic developments, and other factors are likely to continue to play an important role in refining industry economics. These factors can impact, among other things, the level of inventories in the market, resulting in price volatility and a reduction in product margins. Moreover, the refining industry typically experiences seasonal fluctuations in demand for refined products, such as increases in the demand for gasoline during the summer driving season and for volatile seasonal exports of diesel from the United States Gulf Coast.

As a result of government actions taken to curb the spread of COVID-19, and variants thereof, and significant business interruptions, the demand for gasoline and diesel in the regions in which our Petroleum Segment operates declined substantially beginning at the end of the first quarter of 2020. However, building on recovery signs observed in late 2020, the U.S. market for refined products continued to show signs of recovery throughout 2021 and into 2022. Gasoline demand increased due to increased mobility, which is the main driver for highway travel, while the increase in diesel demand is generally a result of the opening of coastal states such as California, New York, New Jersey, and Florida to global shipping and commerce. The combination of improving demand and declining inventories led to an increase in refined products prices and crack spreads during 2021 and into 2022. Additionally, the U.S. demand for jet fuels has begun to recover, albeit at a slower pace than gasoline and diesel, as international and domestic business and leisure air travel increases. Jet fuel demand is approximately 87% of pre-2020 demand levels as of March 31, 2022. From a global perspective, the U.S. Energy Information Administration ("EIA") currently expects oil production will increase by more than global oil consumption, resulting in a rise of approximately 156 million barrels in 2022. However, these projections depend on the production decisions of OPEC, U.S. oil production, and the pace of oil demand growth. While the refining market has largely recovered, uncertainty remains as to whether another wave of COVID-19 cases may spur additional governmental restrictions and lock-downs in the future which could decrease demand once again. Furthermore, the Russia-Ukraine conflict creates additional uncertainty, as sanctions on Russian oil exports, specifically diesel exports, have significantly influenced markets. The resolution of this conflict will continue to affect markets going forward.

In addition to current market conditions discussed above, we continue to be impacted by significant volatility related to compliance requirements under the Renewable Fuel Standard ("RFS"), proposed climate change laws, and regulations. The petroleum business is subject to the RFS, which, each year, requires blending "renewable fuels" with transportation fuels or purchasing renewable identification numbers ("RINs"), in lieu of blending, or otherwise be subject to penalties. Our cost to comply with the RFS is dependent upon a variety of factors, which include the availability of ethanol and biodiesel for blending at our refineries and downstream terminals or RINs for purchase, the price at which RINs can be purchased, transportation fuel production levels, and the mix of our products, all of which can vary significantly from period to period, as well as certain waivers or exemptions to which we may be entitled. Additionally, our costs to comply with the RFS depend on the consistent and timely application of the program by the Environmental Protection Agency ("EPA"), such as timely establishment of the annual renewable volume obligation ("RVO"). Due to the EPA's unlawful failure to establish the 2021 and 2022 RVOs by the November 30, 2020 and 2021 statutory deadlines, respectively, the EPA's delay in issuing decisions on pending small refinery hardship petitions, and the influence exerted and climate change initiatives announced by the Biden administration, among other factors, the price of RINs has been highly volatile and remains high. The price of RINs has also been impacted by the depletion of the carryover RIN bank, as demand destruction during the COVID-19 pandemic resulted in reduced ethanol blending and RIN generation did not keep pace with mandated volumes, requiring carryover RINs from the RIN bank to be used to settle blending obligations. As a result, our costs to comply with RFS (based on the 2020 RVO and proposed preliminary 2021 and 2022 RVO range, for the respective periods, excluding the impacts of any exemptions or waivers to which the Petroleum Segment may be entitled) increased significantly throughout 2020, 2021, and remain significant in 2022. Additionally, the EPA's unlawful failure to establish the 2021 and 2022 RVOs has made it difficult for regulators to forecast the demand for gasoline, diesel, and jet fuel consumption, which may drive a decrease in the availability and increase the cost of RINs.

On December 7, 2021, the EPA proposed revised 2020, preliminary 2021, and 2022 RVO ranges. In addition, a proposal to deny substantially all pending petitions for small refinery exemptions ("SRE") was released. Although both of the previously mentioned proposals are not yet final, these proposals have kept the price of RINs elevated. The EPA's actions, and unlawful failure to act, as well as the outcome of numerous pending lawsuits relating to the RFS, could materially impact the price of RINs and existing waiver applications. As a result, we continue to expect significant volatility in the price of RINs during 2022 and such volatility could have material impacts on the Company's results of operations, financial condition and cash flows.

In December 2020, the Board approved the renewable diesel project at our Wynnewood Refinery, to convert the Wynnewood Refinery's hydrocracker to a renewable diesel unit ("RDU") and is expected to be capable of producing up to 100 million gallons of renewable diesel per year, generating approximately 170 to 180 million RINs annually. Currently, total estimated cost for the project is $175 million. The hydrocracker conversion to renewable diesel service was completed in April 2022, and we are in the process of ramping up production. The production of renewable diesel is expected to significantly reduce our net exposure to the RFS. Further, the RDU should enable us to capture additional benefits associated with the existing blenders' tax credit currently set to expire at the end of 2022 and growing low carbon fuel standard programs across the country, with programs in place in California and Oregon and new programs anticipated to be implemented over the next few years. In May 2021, the Board approved a $10 million capital expenditure for the completion of the design and ordering of certain long-lead equipment relating to a potential project to add pretreating capabilities for the RDU at the Wynnewood Refinery and for the completion of the design for a potential conversion of an existing hydrotreater at our refinery in Coffeyville, Kansas (the "Coffeyville Refinery") to renewable diesel service and sustainable aviation fuel services. In November 2021, the Board approved the pretreater project at the Wynnewood Refinery, which is expected to be completed in the first quarter of 2023 at an estimated cost of $60 million. The pretreatment unit should enable us to process a wider variety of renewable diesel feedstocks and untreated soybean and corn oil at the Wynnewood Refinery, most of which have a lower carbon intensity than soybean oil and generate additional low carbon fuel standard credits. When completed, these collective renewable diesel efforts could effectively mitigate a substantial majority, if not all, of our RFS exposure. However, impacts from recent climate change initiatives under the Biden administration, actions taken by the U.S. Supreme Court, resulting administration actions under the RFS, and market conditions could significantly impact the amount by which our renewable diesel business mitigates our costs to comply with the RFS, if at all.

As of March 31, 2022, we have an estimated open position (excluding the impacts of any exemptions or waivers to which we may be entitled) under the RFS for 2020, 2021, and 2022 of approximately 426 million RINs, excluding approximately 1 million of net open, fixed-price commitments to purchase RINs, resulting in a potential liability of $585 million. The Company's open RFS position, which does not consider open commitments expected to settle in future periods, is marked-to-market each period and thus significant market volatility, as experienced in late 2021 and 2022 to date, results in significant volatility in our RFS expense from period to period. We recognized an expense of approximately $107 million and $178 million for the three months ended March 31, 2022 and 2021, respectively, for the Petroleum Segment's compliance with the RFS. The expense in 2022 compared to 2021 was driven by an increase in RINs pricing through the first quarter of 2022 and our open position with respect to both the 2020 and 2021 RVO obligations (excluding the impacts of any exemptions or waivers to which we may be entitled). Of the expense recognized during the three months ended March 31, 2022, $19 million relates to the revaluation of our net RVO position as of March 31, 2022. The revaluation represents the summation of the prior period obligation and current period commercial activities, marked at the period end market price. Based upon recent market prices of RINs in April 2022, current estimates related to other variable factors, including our anticipated blending and purchasing activities, and the impact of the open RFS positions and resolution thereof, our estimated consolidated cost to comply with the RFS (without regard to any SREs we may receive) is $400 to $410 million for 2022, which excludes the estimated RINs credit generation from renewable diesel operations of $160 to $170 million.

Market Indicators

NYMEX WTI crude oil is an industry wide benchmark that is utilized in the market pricing of a barrel of crude oil. The pricing differences between other crudes and WTI, known as differentials, show how the market for other crude oils such as WCS, White Cliffs ("Condensate"), Brent Crude ("Brent"), and Midland WTI ("Midland") are trending. Due to the COVID-19 pandemic, the Russia-Ukraine conflict, and, in each case, actions taken by governments and others in response thereto, refined product prices have experienced extreme volatility. As a result of the current environment, refining margins have been and will continue to be volatile.

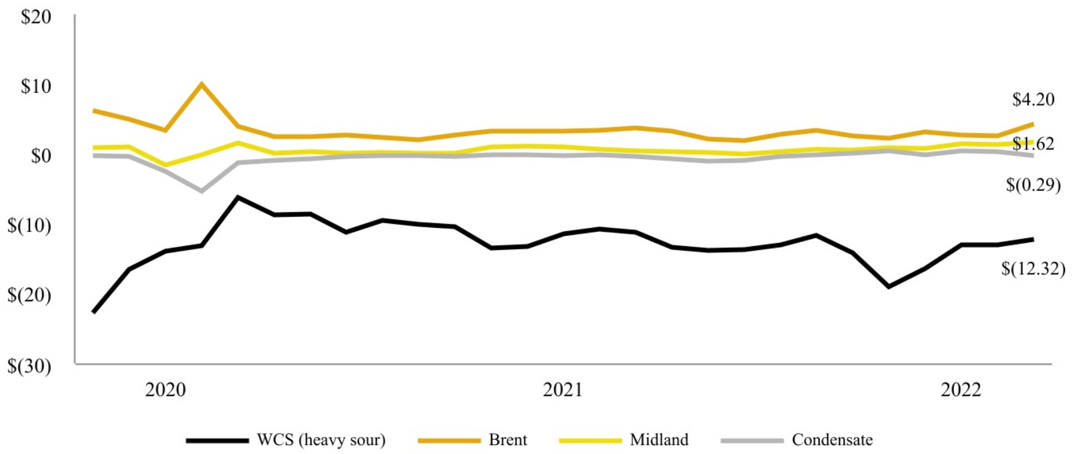
As a performance benchmark and a comparison with other industry participants, we utilize NYMEX and Group 3 crack spreads. These crack spreads are a measure of the difference between market prices for crude oil and refined products and are a commonly used proxy within the industry to estimate or identify trends in refining margins. Crack spreads can fluctuate significantly over time as a result of market conditions and supply and demand balances. The NYMEX 2-1-1 crack spread is calculated using two barrels of WTI producing one barrel of NYMEX RBOB Gasoline ("RBOB") and one barrel of NYMEX NY Harbor ULSD ("HO"). The Group 3 2-1-1 crack spread is calculated using two barrels of WTI crude oil producing one barrel of Group 3 sub-octane gasoline and one barrel of Group 3 ultra-low sulfur diesel.

Both NYMEX 2-1-1 and Group 3 2-1-1 crack spreads increased during the three months ended March 31, 2022 compared to the three months ended March 31, 2021. The NYMEX 2-1-1 crack spread averaged $28.67 per barrel during the three months ended March 31, 2022 compared to $15.84 per barrel in the three months ended March 31, 2021. The Group 3 2-1-1 crack spread averaged $22.20 per barrel during the three months ended March 31, 2022 compared to $16.33 per barrel during the three months ended March 31, 2021.

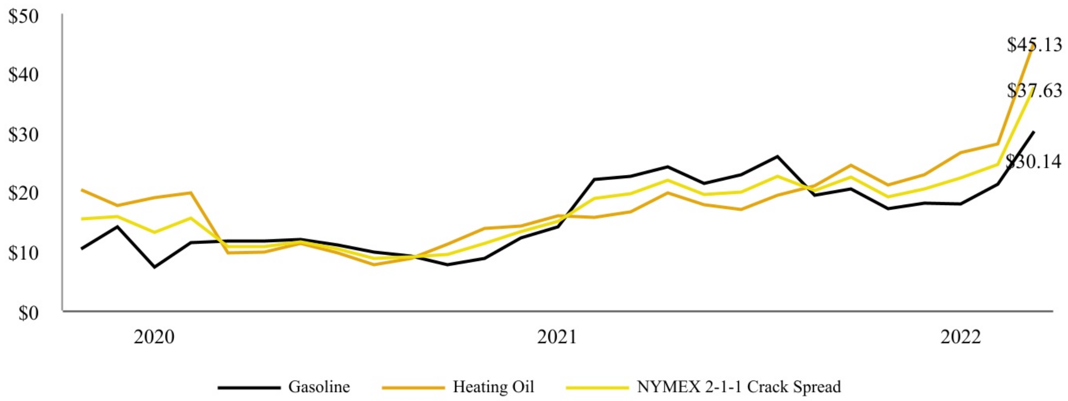
Average monthly prices for RINs increased 12.6% during the first quarter of 2022 compared to the same period of 2021. On a blended barrel basis (calculated using applicable RVO percentages), RINs approximated $6.11 per barrel during the first quarter of 2022 compared to $5.43 per barrel during the first quarter of 2021.

The charts below are presented, on a per barrel basis, by month through March 31, 2022:

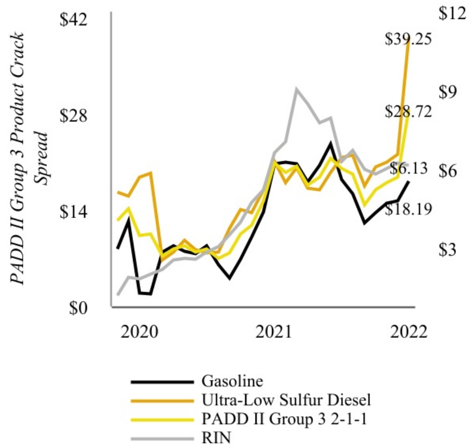
Crude Oil Differentials against WTI [1][2]



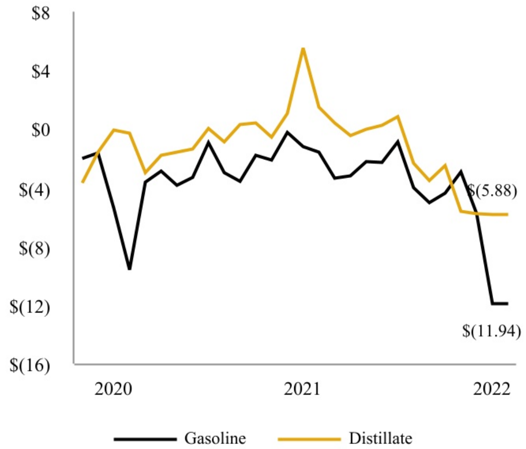
NYMEX Crack Spreads (2)



PADD II Group 3 Product Crack Spread and RIN Pricing (2) ***($/bbl)***



Group 3 Differential against NYMEX WTI (1)(2) ***($/bbl)***



(1) The change over time in NYMEX - WTI, as reflected in the charts above, is illustrated below.

(in $/bbl)	Average 2020	Average December 2020	Average 2021	Average December 2021	Average 2022	Average March 2022
WTI	$ 39.34	$ 47.07	$ 68.11	$ 71.69	$ 95.01	$ 108.26

(2) Information used within these charts was obtained from reputable market sources, including the New York Mercantile Exchange (“NYMEX”), Intercontinental Exchange, and Argus Media, among others.

Nitrogen Fertilizer Segment

Within the Nitrogen Fertilizer Segment, earnings and cash flows from operations are primarily affected by the relationship between nitrogen fertilizer product prices, utilization, and operating costs and expenses, including pet coke and natural gas feedstock costs.

The price at which nitrogen fertilizer products are ultimately sold depends on numerous factors, including the global supply and demand for nitrogen fertilizer products, world grain demand and production levels, inflation, global supply disruptions, changes in world population, the cost and availability of fertilizer transportation infrastructure, local market conditions, operating levels of competing facilities, weather conditions, the availability of imports, impacts of foreign imports and foreign subsidies thereof, and the extent of government intervention in agriculture markets. These factors can impact, among other things, the level of inventories in the market, resulting in price volatility and a reduction in product margins. Moreover, the industry typically experiences seasonal fluctuations in demand for nitrogen fertilizer products.

As a result of the Russian invasion of Ukraine, the Black Sea, a major export point for nitrogen fertilizer and grains from these countries, has been closed to exports, which prompted tightening global supply conditions for nitrogen fertilizer in advance of spring planting and wheat and corn availability, two major exports from this region. Further, while fertilizers have not been formally sanctioned by Western countries, many Western customers are either unwilling to purchase Russian fertilizers or logistics make it too costly to import these fertilizers. Additionally, natural gas supplied from Russia to Western Europe has been constrained and natural gas prices have remained elevated since September 2021, causing a significant portion of European nitrogen fertilizer production capacity to be curtailed. Overall, these events have caused grain and fertilizer prices to rise, and we currently expect these conditions to persist for the remainder of 2022.

Market Indicators

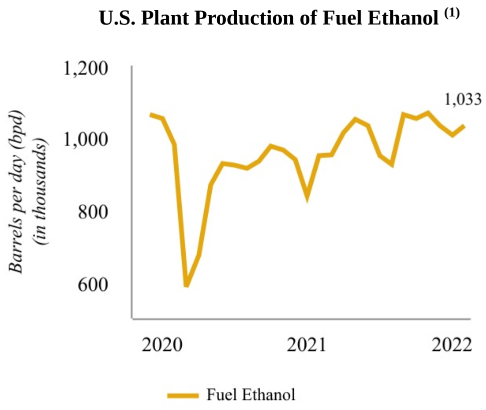
While there is risk of shorter-term volatility given the inherent nature of the commodity cycle, the Company believes the long-term fundamentals for the U.S. nitrogen fertilizer industry remain intact. The Nitrogen Fertilizer Segment views the anticipated combination of (i) increasing global population, (ii) decreasing arable land per capita, (iii) continued evolution to more protein-based diets in developing countries, (iv) sustained use of corn and soybeans as feedstock for the domestic production of ethanol and other renewable fuels, and (v) positioning at the lower end of the global cost curve should provide a solid foundation for nitrogen fertilizer producers in the U.S. over the longer term.

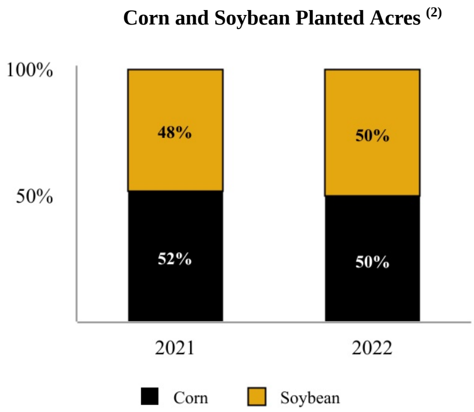
Corn and soybeans are two major crops planted by farmers in North America. Corn crops result in the depletion of the amount of nitrogen within the soil in which it is grown, which in turn, results in the need for this nutrient to be replenished after each growing cycle. Unlike corn, soybeans are able to obtain most of their own nitrogen through a process known as “N fixation.” As such, upon harvesting of soybeans, the soil retains a certain amount of nitrogen which results in lower demand for nitrogen fertilizer for the following corn planting cycle. Due to these factors, nitrogen fertilizer consumers generally operate a balanced corn-soybean rotational planting cycle as evident by the chart presented below as of March 31, 2022.

The relationship between the total acres planted for both corn and soybean has a direct impact on the overall demand for nitrogen products, as the market and demand for nitrogen increases with increased corn acres and decreases with increased soybean acres. Additionally, an estimated 11 billion pounds of soybean oil is expected to be used in producing cleaner biodiesel in marketing year 2021/2022. Multiple refiners have announced renewable diesel expansion projects for 2021 and beyond, which will only increase the demand for soybeans and potentially for corn and canola.

The preliminary 2022 United States Department of Agriculture (“USDA”) reports on corn and soybean acres planted indicated farmers’ intentions to plant 89.5 million acres of corn, representing a decrease of 4.1% in corn acres planted as compared to 93.4 million corn acres in 2021. Planted soybean acres are estimated to be 91.0 million acres, representing a 4.3% increase in soybean acres planted as compared to 87.2 million soybean acres in 2021. The combined corn and soybean planted acres of 180.5 million is in line with the acreage planted in 2021, which was the highest in history. Due to higher input costs for corn planting and increased demand for soybeans, particularly for renewable diesel production, it was more favorable for farmers to plant soybeans compared to corn. The lower planted corn acres in 2022 is expected to be supportive of corn prices for 2022 and 2023.

Ethanol is blended with gasoline to meet renewable fuel standard requirements and for its octane value. Ethanol production has historically consumed approximately 35% of the U.S. corn crop, so demand for corn generally rises and falls with ethanol demand, as evidenced by the charts below through March 31, 2022.



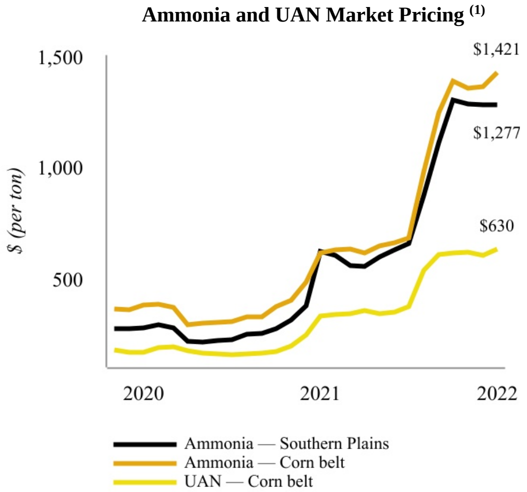


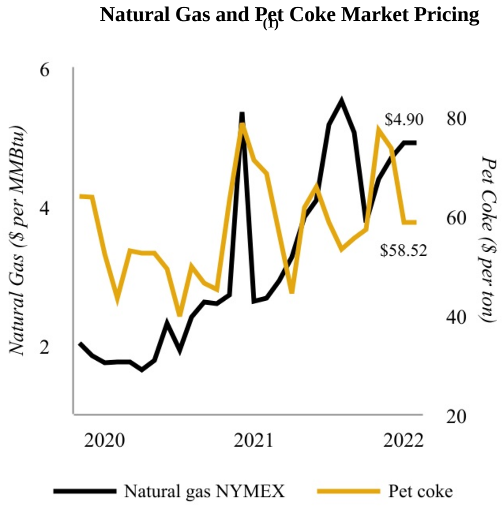
(1) Information used within this chart was obtained from the EIA through March 31, 2022.
(2) Information used within this chart was obtained from the USDA, National Agricultural Statistics Services as of March 31, 2022.

Weather continues to be a critical variable for crop production. Even with high planted acres and trendline yields per acre in the U.S., inventory levels for corn and soybeans remain below historical levels and prices have remained elevated. With tight grain and fertilizer inventory levels driven by the war in Ukraine, prices for grains and fertilizers are expected to remain elevated throughout 2022. These conditions are driving strong demand for nitrogen fertilizer, as well as other crop inputs, for the spring 2022 planting season.

On June 30, 2021, CF Industries Nitrogen, L.L.C., Terra Nitrogen, Limited Partnership, and Terra International (Oklahoma) LLC filed petitions with the U.S. Department of Commerce (“USDOC”) and the U.S. International Trade Commission (the “ITC”) requesting the initiation of antidumping and countervailing duty investigations on imports of UAN from Russia and Trinidad and Tobago (“Trinidad”). Following investigations by both USDOC and ITC, on November 30, 2021, USDOC determined that UAN imports from Russia are unfairly subsidized at rates ranging from 9.66% to 9.84% and UAN imports from Trinidad are unfairly subsidized at a rate of 1.83%. On January 27, 2022, USDOC found that Russian UAN imports are sold at less than fair value into the U.S. market at rates ranging from 9.15% to 127.19% and that Trinidadian UAN imports at a rate of 63.08%. As a result of these determinations, USDOC will impose cash deposit requirements on imports of UAN from Russia and Trinidad based on the preliminary rates of antidumping duties. We believe that if the antidumping and countervailing duty preliminary determinations are confirmed by USDOC, there will likely be lower amounts of imported UAN from Russia and Trinidad for the next several years.

The charts below show relevant market indicators for the Nitrogen Fertilizer Segment by month through March 31, 2022:





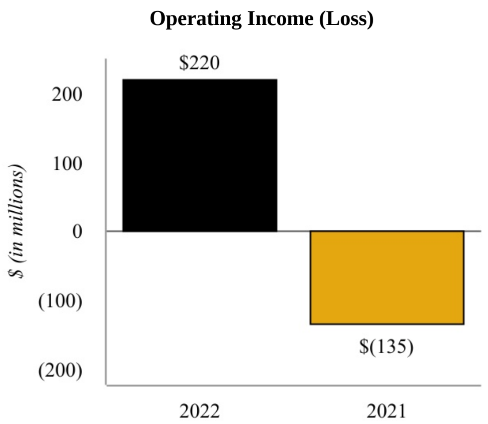
(1) Information used within these charts was obtained from various third-party sources, including Green Markets (a Bloomberg Company), Pace Petroleum Coke Quarterly, and the EIA, amongst others.

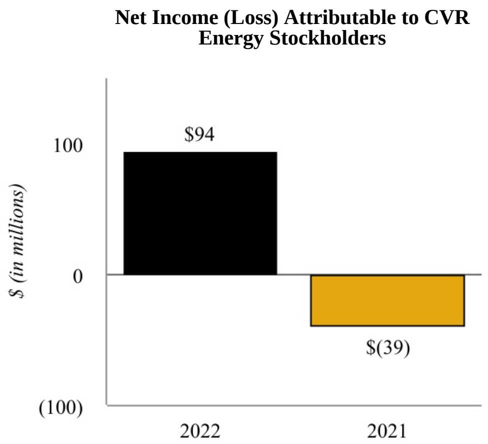
Results of Operations

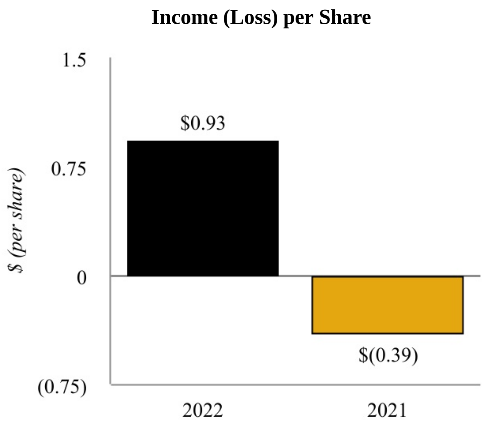
Consolidated

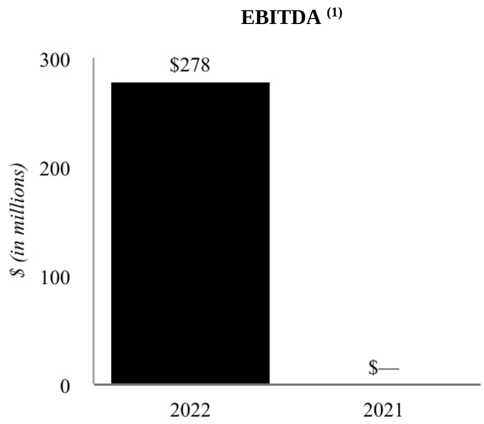
Our consolidated results of operations include certain other unallocated corporate activities and the elimination of intercompany transactions and, therefore, do not equal the sum of the operating results of the Petroleum Segment and Nitrogen Fertilizer Segment.

Consolidated Financial Highlights (Three Months Ended March 31, 2022 versus March 31, 2021)









(1) See “Non-GAAP Reconciliations” section below for reconciliations of the non-GAAP measures shown above.

Three Months Ended March 31, 2022 versus March 31, 2021 (Consolidated)

Overview - For the three months ended March 31, 2022, the Company’s operating income increased $355 million to $220 million, as compared to the three months ended March 31, 2021. Refer to our discussion of each segment’s results of operations below for further information.

Investment Income on Marketable Securities - On June 10, 2021, the Company distributed substantially all of its holdings in Delek US Holdings, Inc. (“Delek”), of which the Company was the largest stockholder holding approximately 14.3% of Delek’s outstanding common stock, as part of a special dividend. On January 18, 2022, the Company divested its remaining nominal holdings in Delek, and as of March 31, 2022, the Company does not hold an investment in other marketable securities of Delek. For the three months ended March 31, 2022 and 2021, we did not receive dividend income. The Company did not recognize a gain or a loss on the investment during the three months ended March 31, 2022 compared to an unrealized gain based on market pricing on March 31, 2021 of $62 million during the three months ended March 31, 2021.

Income Tax Expense (Benefit) - Income tax expense for the three months ended March 31, 2022 was $34 million, or 18.0% of income before income tax, as compared to an income tax benefit of $42 million, or 43.3% of loss before income tax for the three months ended March 31, 2021. The fluctuation in income tax was due primarily to changes in pretax earnings and earnings attributable to noncontrolling interest from the three months ended March 31, 2021 to the three months ended March 31, 2022. The decrease in effective income tax rate was due primarily to the relationship between pretax results, earnings attributable to noncontrolling interest and state income tax credits generated.

Petroleum Segment

The Petroleum Segment utilizes certain inputs within its refining operations. These inputs include crude oil, butanes, natural gasoline, ethanol, and bio-diesel (these are also known as “throughputs”).

Refining Throughput and Production Data by Refinery

Throughput Data *(in bpd)*	**Three Months Ended March 31,** 2022	2021
Coffeyville		
Regional crude	**39,766**	29,232
WTI	**47,815**	52,936
Midland WTI	**2,602**	—
Condensate	**11,352**	7,051
Heavy Canadian	**6,761**	—
DJ Basin	**18,035**	16,733
Other feedstocks and blendstocks	**11,344**	8,725
Wynnewood		
Regional crude	**43,403**	55,159
WTL	**344**	3,535
Midland WTI	**1,634**	—
WTS	**578**	—
Condensate	**10,285**	9,540
Other feedstocks and blendstocks	**3,425**	3,182
Total throughput	**197,344**	186,093

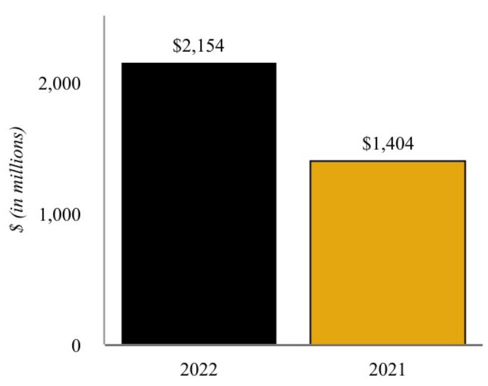
Production Data *(in bpd)*	**Three Months Ended March 31,** 2022	2021
Coffeyville		
Gasoline	**75,050**	61,664
Distillate	**54,665**	46,542
Other liquid products	**4,988**	4,107
Solids	**4,359**	3,397
Wynnewood		
Gasoline	**29,366**	37,456
Distillate	**22,518**	29,164
Other liquid products	**5,134**	2,947
Solids	**20**	22
Total production	**196,100**	185,299
Light product yield (as % of crude throughput) (1)	**99.5 %**	100.4 %
Liquid volume yield (as % of total throughput) (2)	**97.2 %**	97.7 %
Distillate yield (as % of crude throughput) (3)	**42.3 %**	43.5 %

(1) Total Gasoline and Distillate divided by total Regional crude, WTI, WTL, Midland WTI, WTS, Condensate, Heavy Canadian, and DJ Basin throughput.
(2) Total Gasoline, Distillate, and Other liquid products divided by total throughput.
(3) Total Distillate divided by total Regional crude, WTI, WTL, Midland WTI, WTS, Condensate, Heavy Canadian, and DJ Basin throughput.

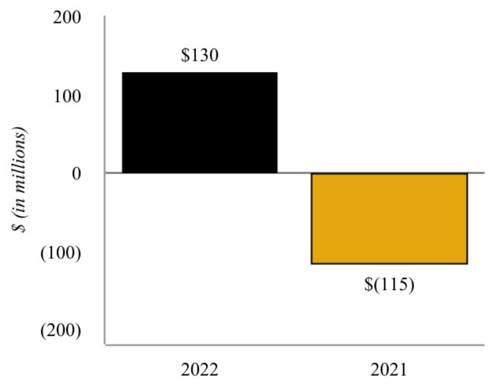
Petroleum Segment Financial Highlights (Three Months Ended March 31, 2022 versus March 31, 2021)

Overview - For the three months ended March 31, 2022, the Petroleum Segment's operating income and net income were $130 million and $126 million, respectively, compared to operating loss and net loss of $115 million and $110 million, respectively, for the three months ended March 31, 2021. The improvements in operating income and net income during the three months ended March 31, 2022 were primarily due to improved crack spreads, lower RINs cost, and improved throughputs as a result of Winter Storm Uri in the prior period. This was partially offset by increased labor costs.

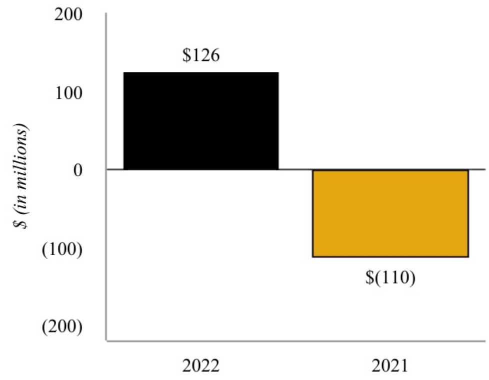
Net Sales



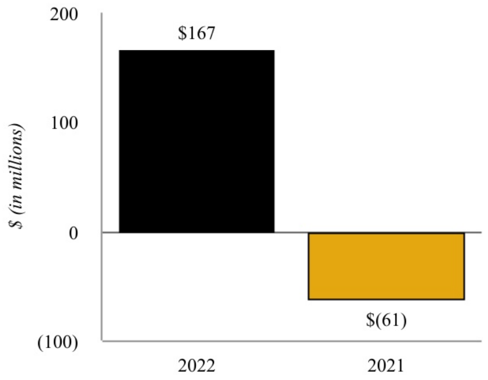
Operating Income (Loss)



Net Income (Loss)

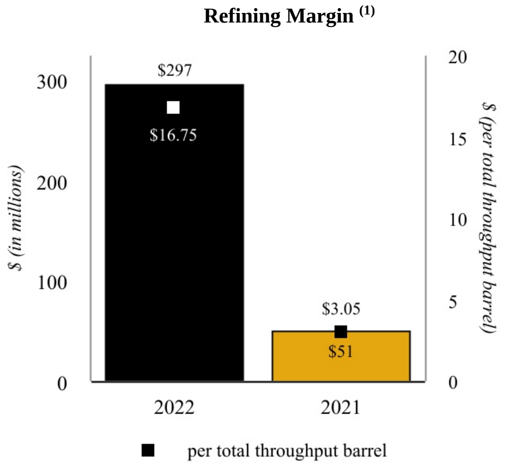


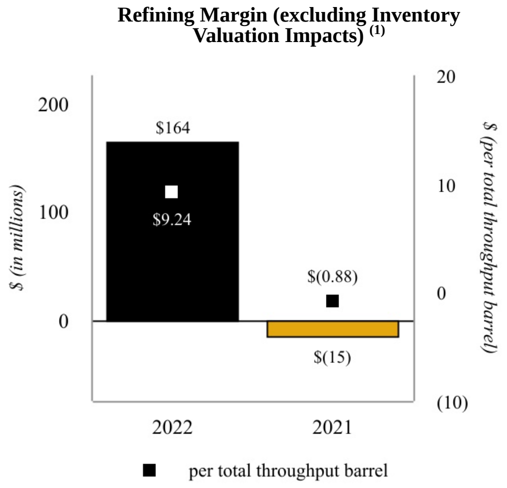
EBITDA [(1)]



(1) See "Non-GAAP Reconciliations" section below for reconciliations of the non-GAAP measures shown above.

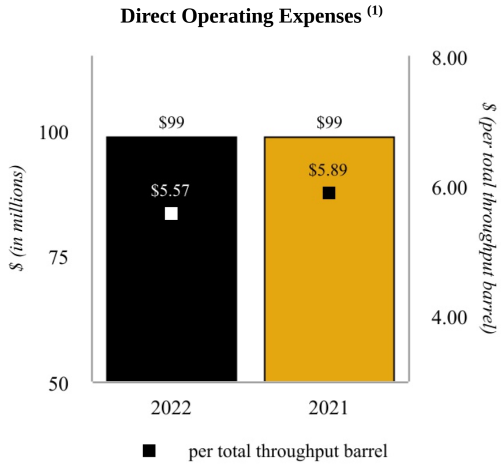
Net Sales - For the three months ended March 31, 2022, net sales for the Petroleum Segment increased $750 million when compared to the three months ended March 31, 2021. The increase in net sales was due to increased prices resulting from tight regional inventory levels and the ongoing conflict in Ukraine during the three months ended March 31, 2022, compared to the three months ended March 31, 2021. Further, net sales for the three months ended March 31, 2021 were impacted by Winter Storm Uri, resulting in reduced rates at both refineries.





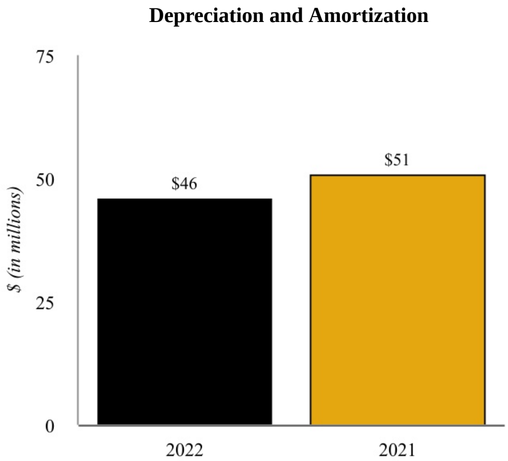
(1) See “Non-GAAP Reconciliations” section below for reconciliations of the non-GAAP measures shown above.

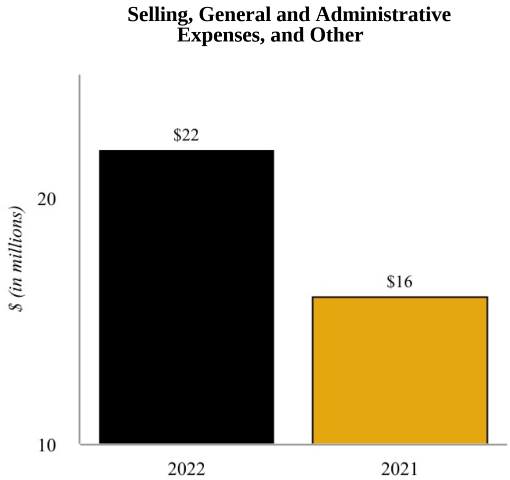
Refining Margin - For the three months ended March 31, 2022, refining margin was $297 million, or $16.75 per throughput barrel, as compared to $51 million, or $3.05 per throughput barrel, for the three months ended March 31, 2021. The increase in refining margin of $246 million was primarily due to an increase in product crack spreads and an increase in crude oil prices. The Group 3 2-1-1 crack spread increased by $5.87 per barrel relative to the first quarter of 2021, driven by increasing refined product demand, tight inventory levels, and supply concerns due to the ongoing Russia-Ukraine conflict. Further, for the three months ended March 31, 2022, throughput volumes improved by 11,251 bpd due to plant outages in the prior period resulting from weather events. Offsetting these impacts, the Company recognized costs to comply with RFS of $88 million, or $4.93 per throughput barrel, which excludes the RINs revaluation impact of $19 million, or $1.08 per total throughput barrel, for the three months ended March 31, 2022. This is compared to RFS compliance costs of $66 million, or $3.97 per throughput barrel, which excludes the RINs revaluation impact of $111 million, or $6.65 per total throughput barrel, for the three months ended March 31, 2021. The increase in RFS compliance costs in 2022 was primarily related to higher RINs prices and a higher renewable volume obligation for the three months ended March 31, 2022 compared to the prior year period. The RINs revaluation impact decreased in 2022 as a result of decreased volatility in RINs prices for the current period. We also recognized a net gain on derivatives of $8 million during the three months ended March 31, 2022 compared to a derivative loss of $32 million during the three months ended March 31, 2021. Our derivative activity was primarily a result of inventory hedging activity, Canadian purchases and sales, and crack spread swaps.



(1) Exclusive of depreciation and amortization expense.

Direct Operating Expenses (Exclusive of Depreciation and Amortization) - For the three months ended March 31, 2022, direct operating expenses (exclusive of depreciation and amortization) were $99 million, as compared to $99 million for the three months ended March 31, 2021. On a total throughput barrel basis, direct operating expenses decreased to $5.57 per barrel from $5.89 per barrel for the three months ended March 31, 2022 as a result of lower throughput rates in the prior period due to Winter Storm Uri.





Selling, General, and Administrative Expenses, and Other - For the three months ended March 31, 2022, selling, general and administrative expenses and other was $22 million, as compared to $16 million for the three months ended March 31, 2021. The increase was primarily a result of increased personnel costs driven primarily by higher share-based compensation during the three months ended March 31, 2022.

Nitrogen Fertilizer Segment

Utilization and Production Volumes - The following tables summarize the ammonia utilization at the Nitrogen Fertilizer Segment's facility in Coffeyville, Kansas (the "Coffeyville Fertilizer Facility") and East Dubuque, Illinois facility (the "East Dubuque Fertilizer Facility"). Utilization is an important measure used by management to assess operational output at each of the Nitrogen Fertilizer Segment's facilities. Utilization is calculated as actual tons of ammonia produced divided by capacity adjusted for planned maintenance and turnarounds.

Utilization is presented solely on ammonia production, rather than each nitrogen product, as it provides a comparative baseline against industry peers and eliminates the disparity of facility configurations for upgrade of ammonia into other nitrogen products. With efforts primarily focused on ammonia upgrade capabilities, we believe this measure provides a meaningful view of how well we operate.

Gross tons produced for ammonia represent the total ammonia produced, including ammonia produced that was upgraded into other fertilizer products. Net tons available for sale represent the ammonia available for sale that was not upgraded into other fertilizer products. The table below presents all of these Nitrogen Fertilizer Segment metrics for the three months ended March 31, 2022 and 2021:

	Three Months Ended March 31,	
	2022	**2021**
Consolidated Ammonia Utilization	**88 %**	88 %
Production Volumes (in thousands of tons)		
Ammonia (gross produced)	**187**	188
Ammonia (net available for sale)	**52**	70
UAN	**317**	272

On a consolidated basis, the Nitrogen Fertilizer Segment's utilization remained unchanged at 88% for the three months ended March 31, 2022, compared to the three months ended March 31, 2021. The depressed utilization for 2022 was primarily a result of unplanned downtime associated with the Messer air separation plant ("Messer") at the Coffeyville Fertilizer Facility and various pieces of equipment at the East Dubuque Fertilizer Facility. The depressed utilization for 2021 was primarily related to downtime associated with Messer at the Coffeyville Fertilizer Facility in January 2021 and Winter Storm Uri in February 2021.

Sales and Pricing per Ton - Two of the Nitrogen Fertilizer Segment's key operating metrics are total sales volumes for ammonia and UAN, along with the product pricing per ton realized at the gate. Total product sales volumes were favorable, driven by higher production at the Coffeyville Fertilizer Facility due to reduced downtime from Messer outages in 2022 compared to 2021. For the three months ended March 31, 2022, total product sales were favorable, driven by higher overall production and sales in 2022, along with product sales price increases of 252% for ammonia and 212% for UAN. Ammonia and UAN sales prices were favorable primarily due to higher crop pricing coupled with lower fertilizer supply driven by production outages from Hurricane Ida in August and September 2021, increased industry turnaround activity, and the impacts from the Russia-Ukraine conflict. Product pricing at the gate represents net sales less freight revenue divided by product sales volume in tons and is shown in order to provide a pricing measure comparable across the fertilizer industry.

	Three Months Ended March 31,			
	2022		**2021**	
Consolidated sales (thousand tons)				
Ammonia		**40**		32
UAN		**322**		239
Consolidated product pricing at gate (dollars per ton)				
Ammonia	**$**	**1,055**	$	300
UAN		**496**		159

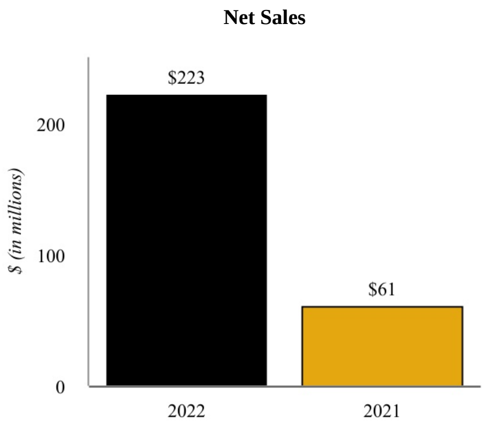
Feedstock - The Coffeyville Fertilizer Facility utilizes a pet coke gasification process to produce nitrogen fertilizer, while the East Dubuque Fertilizer Facility uses natural gas in its production of ammonia. The table below presents these feedstocks for both facilities within the Nitrogen Fertilizer Segment for the three months ended March 31, 2022 and 2021:

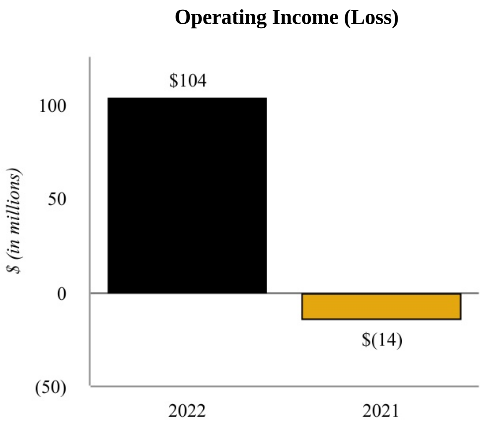
	Three Months Ended March 31,			
	2022		**2021**	
Petroleum coke used in production *(thousand tons)*		**108**		128
Petroleum coke *(dollars per ton)*	**$**	**56.46**	$	42.91
Natural gas used in production *(thousands of MMBtu)* (1)		**1,761**		1,882
Natural gas used in production *(dollars per MMBtu)* (1)	**$**	**5.54**	$	3.10
Natural gas cost of materials and other *(thousands of MMBtu)* (1)		**1,528**		940
Natural gas cost of materials and other *(dollars per MMBtu)* (1)	**$**	**5.62**	$	2.94

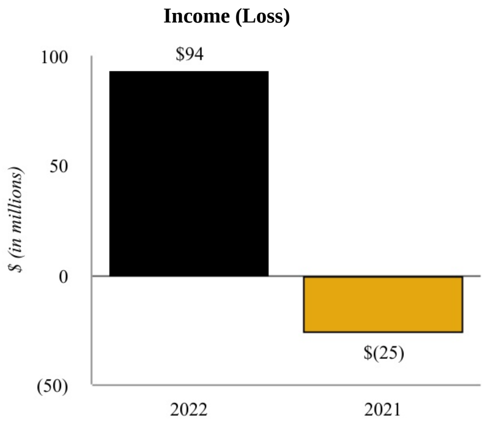
(1) The feedstock natural gas shown above does not include natural gas used for fuel. The cost of natural gas used for fuel is included in Direct operating expenses (exclusive of depreciation and amortization).

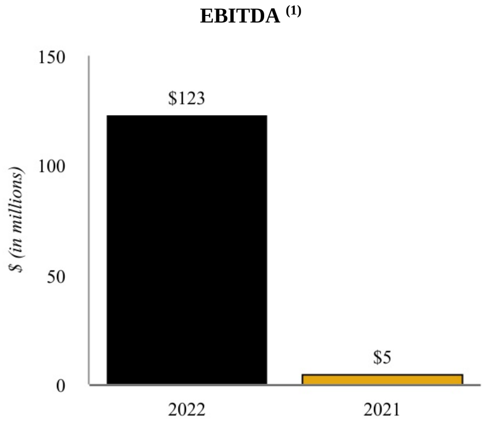
Nitrogen Fertilizer Segment Financial Highlights (Three Months Ended March 31, 2022 versus March 31, 2021)

Overview - For the three months ended March 31, 2022, the Nitrogen Fertilizer Segment's operating income and net income were $104 million and $94 million, respectively, representing improvements of $118 million and $119 million, respectively, compared to the three months ended March 31, 2021. These increases were driven by higher product sales prices and sales volumes for UAN and ammonia compared to the three months ended March 31, 2021.









(1) See "Non-GAAP Reconciliations" section below for reconciliations of the non-GAAP measures shown above.

Net Sales - For the three months ended March 31, 2022, the Nitrogen Fertilizer Segment's net sales increased by $162 million to $223 million compared to the three months ended March 31, 2021. This increase was primarily due to favorable UAN and ammonia pricing conditions and sales volumes which contributed $138 million and $15 million, respectively, in higher revenues, as compared to the three months ended March 31, 2021.

The following table demonstrates the impact of changes in sales volumes and pricing for the primary components of net sales, excluding urea products, freight, and other revenue, for the three months ended March 31, 2022, as compared to the three months ended March 31, 2021:

(in millions)	Price Variance	Volume Variance
UAN	$ 108	$ 13
Ammonia	30	2

The $755 and $337 per ton increases in ammonia and UAN sales pricing, respectively, for the three months ended March 31, 2022, as compared to the three months ended March 31, 2021, were primarily attributable to continued improvement in market conditions as supplies of nitrogen fertilizer remained tight following the production outages related to Hurricane Ida, heightened turnaround activity during the summer of 2021, energy shortages in Europe and Asia, and further supply concerns due to the Russia-Ukraine conflict. The increase in UAN sales volumes for the three months ended March 31, 2022 compared to the three months ended March 31, 2021 was primarily attributable to higher production at the Coffeyville Fertilizer Facility due to reduced downtime from Messer outages in 2022.

Cost of Materials and Other - For the three months ended March 31, 2022, cost of materials and other was $30 million, compared to $18 million for the three months ended March 31, 2021. The $12 million increase was comprised primarily of a $4 million increase in natural gas pricing and usage at the East Dubuque Fertilizer Facility, a $3 million increase in distribution costs driven by freight, a $2 million increase in purchases of ammonia, a $1 million increase in pet coke and hydrogen feedstock costs at the Coffeyville Fertilizer Facility, and a lower build in inventories contributing $3 million.

Non-GAAP Measures

Our management uses certain non-GAAP performance measures, and reconciliations to those measures, to evaluate current and past performance and prospects for the future to supplement our financial information presented in accordance with accounting principles generally accepted in the United States ("GAAP"). These non-GAAP financial measures are important factors in assessing our operating results and profitability and include the performance and liquidity measures defined below.

The following are non-GAAP measures we present for the period ended March 31, 2022:

EBITDA - Consolidated net income (loss) before (i) interest expense, net, (ii) income tax expense (benefit) and (iii) depreciation and amortization expense.

Petroleum EBITDA and Nitrogen Fertilizer EBITDA - Segment net income (loss) before segment (i) interest expense, net, (ii) income tax expense (benefit), and (iii) depreciation and amortization.

Refining Margin - The difference between our Petroleum Segment net sales and cost of materials and other.

Refining Margin, adjusted for Inventory Valuation Impacts - Refining Margin adjusted to exclude the impact of current period market price and volume fluctuations on crude oil and refined product inventories purchased in prior periods and lower of cost or net realizable value adjustments, if applicable. We record our commodity inventories on the first-in-first-out basis. As a result, significant current period fluctuations in market prices and the volumes we hold in inventory can have favorable or unfavorable impacts on our refining margins as compared to similar metrics used by other publicly-traded companies in the refining industry.

Refining Margin and Refining Margin adjusted for Inventory Valuation Impacts, per Throughput Barrel - Refining Margin and Refining Margin adjusted for Inventory Valuation Impacts divided by the total throughput barrels during the period, which is calculated as total throughput barrels per day times the number of days in the period.

Direct Operating Expenses per Throughput Barrel - Direct operating expenses for our Petroleum Segment divided by total throughput barrels for the period, which is calculated as total throughput barrels per day times the number of days in the period.

Adjusted EBITDA, Adjusted Petroleum EBITDA and Adjusted Nitrogen Fertilizer EBITDA - EBITDA, Petroleum EBITDA and Nitrogen Fertilizer EBITDA adjusted for certain significant non-cash items and items that management believes are not attributable to or indicative of our on-going operations or that may obscure our underlying results and trends.

Adjusted Earnings (Loss) per Share - Earnings (loss) per share adjusted for certain significant non-cash items and items that management believes are not attributable to or indicative of our on-going operations or that may obscure our underlying results and trends.

Free Cash Flow - Net cash provided by (used in) operating activities less capital expenditures and capitalized turnaround expenditures.

Net Debt and Finance Lease Obligations - Net debt and finance lease obligations is total debt and finance lease obligations reduced for cash and cash equivalents.

Total Debt and Net Debt and Finance Lease Obligations to EBITDA Exclusive of Nitrogen Fertilizer - Total debt and net debt and finance lease obligations is calculated as the consolidated debt and net debt and finance lease obligations less the Nitrogen Fertilizer Segment's debt and net debt and finance lease obligations as of the most recent period ended divided by EBITDA exclusive of the Nitrogen Fertilizer Segment for the most recent twelve-month period.

We present these measures because we believe they may help investors, analysts, lenders and ratings agencies analyze our results of operations and liquidity in conjunction with our U.S. GAAP results, including but not limited to our operating performance as compared to other publicly-traded companies in the refining and fertilizer industries, without regard to historical cost basis or financing methods and our ability to incur and service debt and fund capital expenditures. Non-GAAP measures have important limitations as analytical tools, because they exclude some, but not all, items that affect net earnings and operating income. These measures should not be considered substitutes for their most directly comparable U.S. GAAP financial measures. See "Non-GAAP Reconciliations" included herein for reconciliation of these amounts. Due to rounding, numbers presented within this section may not add or equal to numbers or totals presented elsewhere within this document.

Factors Affecting Comparability of Our Financial Results

Our historical results of operations for the periods presented may not be comparable with prior periods or to our results of operations in the future for the reasons discussed below.

Petroleum Segment

Coffeyville Refinery - During the three months ended March 31, 2022, we capitalized $1 million related to the pre-planning phase of a major planned turnaround that is currently expected to commence in the spring of 2023.

Wynnewood Refinery - The Petroleum Segment's Wynnewood Refinery's major planned turnaround began in late February 2022 and was completed in early April 2022. The pre-planning phase began during the first quarter of 2021. During the three months ended March 31, 2022 and 2021, we capitalized $63 million and $1 million, respectively.

Nitrogen Fertilizer Segment

Coffeyville Fertilizer Facility - The next planned turnaround at the Coffeyville Fertilizer Facility is currently expected to occur in the summer of 2022. For the three months ended March 31, 2022, we incurred turnaround expense of less than $1 million related to the planning for this turnaround.

East Dubuque Fertilizer Facility - The next planned turnaround at the East Dubuque Fertilizer Facility is currently expected to occur in the summer of 2022. For the three months ended March 31, 2022, we incurred turnaround expense of approximately $1 million related to planning for this turnaround.

Non-GAAP Reconciliations

Reconciliation of Net Income (Loss) to EBITDA and Adjusted EBITDA

	Three Months Ended March 31,	
(in millions)	**2022**	**2021**
Net income (loss)	**$ 153**	$ (55)
Interest expense, net	**24**	31
Income tax expense (benefit)	**34**	(42)
Depreciation and amortization	**67**	66
EBITDA	**$ 278**	$ —
Adjustments:		
Revaluation of RFS liability	**19**	111
Loss on marketable securities	**—**	(62)
Unrealized (gain) loss on derivatives	**(6)**	43
Inventory valuation impacts, favorable	**(136)**	(66)
Adjusted EBITDA	**$ 155**	$ 26

Reconciliation of Basic and Diluted Earnings (Loss) per Share to Adjusted Earnings (Loss) per Share

	Three Months Ended March 31,	
	2022	**2021**
Basic and diluted earnings (loss) per share	**$ 0.93**	$ (0.39)
Adjustments: (1)		
Revaluation of RFS liability	**0.14**	0.82
Loss on marketable securities	**—**	(0.46)
Unrealized (gain) loss on derivatives	**(0.05)**	0.32
Inventory valuation impacts, favorable	**(1.00)**	(0.48)
Adjusted earnings (loss) per share	**$ 0.02**	$ (0.19)

(1) Amounts are shown after-tax, using the Company’s marginal tax rate, and are presented on a per share basis using the weighted average shares outstanding for each period.

Reconciliation of Net Cash Provided By Operating Activities to Free Cash Flow

	Three Months Ended March 31,	
	2022	**2021**
Net cash provided by operating activities	**$ 322**	$ 96
Less:		
Capital expenditures	**(26)**	(34)
Capitalized turnaround expenditures	**(15)**	(1)
Free cash flow	**$ 281**	$ 61

Reconciliation of Petroleum Segment Net Income (Loss) to EBITDA and Adjusted EBITDA

	Three Months Ended March 31,	
(in millions)	**2022**	**2021**
Petroleum net income (loss)	**$ 126**	$ (110)
Interest income, net	**(5)**	(2)
Depreciation and amortization	**46**	51
Petroleum EBITDA	**$ 167**	$ (61)
Adjustments:		
Revaluation of RFS liability	**19**	111
Unrealized (gain) loss on derivatives	**(5)**	43
Inventory valuation impacts, favorable (1)	**(133)**	(66)
Petroleum Adjusted EBITDA	**$ 48**	$ 27

(1) The Petroleum Segment’s basis for determining inventory value under GAAP is First-In, First-Out (“FIFO”). Changes in crude oil prices can cause fluctuations in the inventory valuation of crude oil, work in process and finished goods, thereby resulting in a favorable inventory valuation impact when crude oil prices increase and an unfavorable inventory valuation impact when crude oil prices decrease. The inventory valuation impact is calculated based upon inventory values at the beginning of the accounting period and at the end of the accounting period. In order to derive the inventory valuation impact per total throughput barrel, we utilize the total dollar figures for the inventory valuation impact and divide by the number of total throughput barrels for the period.

Reconciliation of Petroleum Segment Gross Profit (Loss) to Refining Margin and Refining Margin Adjusted for Inventory Valuation Impact

(in millions)	Three Months Ended March 31, 2022	2021
Net sales	**$ 2,154**	$ 1,404
Less:		
Cost of materials and other	**(1,857)**	(1,353)
Direct operating expenses (exclusive of depreciation and amortization)	**(99)**	(99)
Depreciation and amortization	**(46)**	(51)
Gross profit (loss)	**152**	(99)
Add:		
Direct operating expenses (exclusive of depreciation and amortization)	**99**	99
Depreciation and amortization	**46**	51
Refining margin	**297**	51
Inventory valuation impacts, favorable [(1)]	**(133)**	(66)
Refining margin, adjusted for inventory valuation impacts	**$ 164**	$ (15)

(1) The Petroleum Segment's basis for determining inventory value under GAAP is First-In, First-Out ("FIFO"). Changes in crude oil prices can cause fluctuations in the inventory valuation of crude oil, work in process and finished goods, thereby resulting in a favorable inventory valuation impact when crude oil prices increase and an unfavorable inventory valuation impact when crude oil prices decrease. The inventory valuation impact is calculated based upon inventory values at the beginning of the accounting period and at the end of the accounting period. In order to derive the inventory valuation impact per total throughput barrel, we utilize the total dollar figures for the inventory valuation impact and divide by the number of total throughput barrels for the period.

Reconciliation of Petroleum Segment Total Throughput Barrels

	Three Months Ended March 31, 2022	2021
Total throughput barrels per day	**197,344**	186,093
Days in the period	**90**	90
Total throughput barrels	**17,760,998**	16,748,383

Reconciliation of Petroleum Segment Refining Margin per Total Throughput Barrel

(in millions, except per total throughput barrel)	Three Months Ended March 31, 2022	2021
Refining margin	**$ 297**	$ 51
Divided by: total throughput barrels	**18**	17
Refining margin per total throughput barrel	**$ 16.75**	$ 3.05

Reconciliation of Petroleum Segment Refining Margin Adjusted for Inventory Valuation Impact per Total Throughput Barrel

(in millions, except per total throughput barrel)	Three Months Ended March 31, 2022	2021
Refining margin, adjusted for inventory valuation impact	**$ 164**	$ (15)
Divided by: total throughput barrels	**18**	17
Refining margin adjusted for inventory valuation impact per total throughput barrel	**$ 9.24**	$ (0.88)

Reconciliation of Petroleum Segment Direct Operating Expenses per Total Throughput Barrel

(in millions, except per total throughput barrel)	Three Months Ended March 31, 2022	Three Months Ended March 31, 2021
Direct operating expenses (exclusive of depreciation and amortization)	**$ 99**	$ 99
Divided by: total throughput barrels	**18**	17
Direct operating expenses per total throughput barrel	**$ 5.57**	$ 5.89

Reconciliation of Nitrogen Fertilizer Segment Net Income (Loss) to EBITDA and Adjusted EBITDA

(in millions)	Three Months Ended March 31, 2022	Three Months Ended March 31, 2021
Nitrogen Fertilizer net income (loss)	**$ 94**	$ (25)
Interest expense, net	**10**	16
Depreciation and amortization	**19**	14
Nitrogen Fertilizer EBITDA and Adjusted EBITDA	**$ 123**	$ 5

Reconciliation of Total Debt and Net Debt and Finance Lease Obligations to EBITDA Exclusive of Nitrogen Fertilizer

(in millions)	Twelve Months Ended March 31, 2022
Total debt and finance lease obligations (1)	**$ 1,595**
Less:	
Nitrogen Fertilizer debt and finance lease obligations (1)	**$ 546**
Total debt and finance lease obligations exclusive of Nitrogen Fertilizer	**1,049**
EBITDA exclusive of Nitrogen Fertilizer	**$ 408**
Total debt and finance lease obligations to EBITDA exclusive of Nitrogen Fertilizer	**2.57**
Consolidated cash and cash equivalents	**$ 676**
Less:	
Nitrogen Fertilizer cash and cash equivalents	**137**
Cash and cash equivalents exclusive of Nitrogen Fertilizer	**539**
Net debt and finance lease obligations exclusive of Nitrogen Fertilizer (2)	**$ 510**
Net debt and finance lease obligations to EBITDA exclusive of Nitrogen Fertilizer (2)	**1.25**

(1) Amounts are shown inclusive of the current portion of long-term debt and finance lease obligations.
(2) Net debt represents total debt and finance lease obligations exclusive of cash and cash equivalents.

(in millions)	June 30, 2021	September 30, 2021	December 31, 2021	March 31, 2022	Twelve Months Ended March 31, 2022
Consolidated					
Net (loss) income	$ (2)	$ 106	$ 25	**$ 153**	**$ 282**
Interest expense, net	38	23	24	**24**	**109**
Income tax (benefit) expense	(6)	47	(7)	**34**	**68**
Depreciation and amortization	72	67	74	**67**	**280**
EBITDA	$ 102	$ 243	$ 116	**$ 278**	**$ 739**
Nitrogen Fertilizer					
Net income	$ 7	$ 35	$ 61	**$ 94**	**$ 197**
Interest expense, net	23	11	11	**10**	**55**
Depreciation and amortization	21	18	21	**19**	**79**
EBITDA	$ 51	$ 64	$ 93	**$ 123**	**$ 331**
EBITDA exclusive of Nitrogen Fertilizer	$ 51	$ 179	$ 23	**$ 155**	**$ 408**

Liquidity and Capital Resources

Our principal source of liquidity has historically been cash from operations. Our principal uses of cash are for working capital, capital expenditures, funding our debt service obligations, and paying dividends to our stockholders, as further discussed below.

Following the significant declines in demand and pricing for crude oil and refined products in 2020 due to the COVID-19 pandemic, market conditions improved steadily throughout 2021 and into 2022, as mobility increased amid the spread of vaccinations and general easing of restrictions related to COVID-19. As refined product demand rebounded toward pre-COVID-19 levels, the permanent loss of refined product supply due to refinery closures in 2020 led to a tightening of supply of refined products that, in conjunction with the increase in demand, led to an increase in prices. In the first quarter of 2022, following the Russian invasion of Ukraine, crude oil and refined product prices increased further and have been volatile over concerns of a reduction in global supply of these products due to sanctions placed on Russian exports by the U.S. and numerous other countries. Despite the extreme volatility in commodity pricing, the increase in refined product pricing during 2021 and into 2022 has had a favorable impact on our business and has not significantly impacted our primary source of liquidity.

While we believe demand for crude oil and refined products has nearly returned to pre-COVID-19 levels and commodity prices have rebounded, there is still uncertainty on the horizon due to COVID-19 and the resolution of the Russia-Ukraine conflict. We continue to maintain our focus on safe and reliable operations, maintain an appropriate level of cash to fund ongoing operations, and protect our balance sheet. As a result of these improving factors, the Board elected to declare a $0.40 cash dividend for the first quarter of 2022. This supports the Company’s continued focus on financial discipline through a balanced approach of evaluation of strategic investment opportunities and stockholder distributions while maintaining adequate capital requirements for ongoing operations throughout the uncertain environment. The Board will continue to evaluate the economic environment, the Company’s cash needs, optimal uses of cash, and other applicable factors, and may elect to make additional changes to the Company’s dividend (if any) in future periods. Additionally, in executing financial discipline, we have successfully implemented the following measures:

- Deferred the majority of our growth capital spending, with the exception of the RDU project and construction of the pre-treatment unit at the Wynnewood Refinery;
- Focused refining maintenance capital expenditures to only include those projects which are a priority to support continuing safe and reliable operations, or which we consider required to support future activities;
- Focused future capital allocation to high-return assets and opportunities that advance participation in the energy industry transformation;

- Continued to focus on discipled management of operational and general and administrative cost reductions;
- For the Petroleum Segment, deferred the Wynnewood Refinery turnaround from the spring of 2021 to the spring of 2022 and deferring the Coffeyville Refinery turnaround from fall of 2021 to spring of 2023; and
- For the Nitrogen Fertilizer Segment, took advantage of downtime to perform maintenance activities, which enabled us to defer the East Dubuque Fertilizer Facility turnaround from 2021 to 2022.

When considering the market conditions and actions outlined above, we currently believe that our cash from operations and existing cash and cash equivalents, along with borrowings, as necessary, will be sufficient to satisfy anticipated cash requirements associated with our existing operations for at least the next 12 months. However, our future capital expenditures and other cash requirements could be higher than we currently expect as a result of various factors including, but not limited to, rising material and labor costs, the costs associated with complying with the Renewable Fuel Standard's outcome of litigation and other factors. Additionally, our ability to generate sufficient cash from our operating activities and secure additional financing depends on our future operational performance, which is subject to general economic, political, financial, competitive, and other factors, some of which may be beyond our control.

Depending on the needs of our business, contractual limitations and market conditions, we may from time to time seek to issue equity securities, incur additional debt, issue debt securities, or redeem, repurchase, refinance, or retire our outstanding debt through privately negotiated transactions, open market repurchases, redemptions, exchanges, tender offers or otherwise, but we are under no obligation to do so. There can be no assurance that we will seek to do any of the foregoing or that we will be able to do any of the foregoing on terms acceptable to us or at all.

On February 22, 2022, CVR Partners redeemed the remaining $65 million in aggregate principal amount of its 2023 UAN Notes at par, plus accrued and unpaid interest. This transaction represents a significant and favorable change in CVR Partners' cash flow and liquidity position, with annual savings of approximately $6 million in future interest expense. See Note 8 ("Long-Term Debt and Finance Lease Obligations") of this Report for further discussion. The Company and its subsidiaries were in compliance with all covenants under their respective debt instruments as of March 31, 2022, as applicable.

We do not have any "off-balance sheet arrangements" as such term is defined within the rules and regulations of the SEC.

Cash Balances and Other Liquidity

As of March 31, 2022, we had total liquidity of approximately $1,082 million, which consisted of consolidated cash and cash equivalents of $676 million, $371 million available under the Petroleum ABL, and $35 million available under the Asset Based Credit Agreement (the "Nitrogen Fertilizer ABL"). As of December 31, 2021, we had $510 million in cash and cash equivalents.

(in millions)	March 31, 2022	December 31, 2021
CVR Partners:		
9.25% Senior Secured Notes, due June 2023 [(1)]	**$ —**	$ 65
6.125% Senior Secured Notes, due June 2028	**550**	550
Unamortized discount and debt issuance costs	**(4)**	(4)
Total CVR Partners debt	**$ 546**	$ 611
CVR Energy:		
5.25% Senior Notes, due February 2025	**$ 600**	$ 600
5.75% Senior Notes, due February 2028	**400**	400
Unamortized debt issuance costs	**(4)**	(5)
Total CVR Energy debt	**$ 996**	$ 995
Total long-term debt	**$ 1,542**	$ 1,606

(1) The $65 million outstanding balance of the 2023 UAN Notes was paid in full on February 22, 2022 at par, plus accrued and unpaid interest.

CVR Partners

As of March 31, 2022, the Nitrogen Fertilizer Segment has the 6.125% Senior Secured Notes, due June 2028 (the "2028 UAN Notes") and the Nitrogen Fertilizer ABL, the proceeds of which may be used to fund working capital, capital expenditures, and for other general corporate purposes. Refer to Note 8 ("Long-Term Debt and Finance Lease Obligations") of this Report and Part II, Item 8, Note 6 ("Long-Term Debt") of our 2021 Form 10-K for further discussion.

CVR Refining

As of March 31, 2022, the Petroleum Segment has the Petroleum ABL, the proceeds of which may be used to fund working capital, capital expenditures, and for other general corporate purposes. Refer to Part II, Item 8, Note 6 ("Long-Term Debt") of our 2021 Form 10-K for further discussion.

CVR Energy

As of March 31, 2022, CVR Energy has the Notes, the net proceeds of which may be used for general corporate purposes, which may include funding acquisitions, capital projects, and/or share repurchases or other distributions to our stockholders. Refer to Part II, Item 8, Note 6 ("Long-Term Debt") of our 2021 Form 10-K for further discussion.

Capital Spending

We divide capital spending needs into two categories: maintenance and growth. Maintenance capital spending includes non-discretionary maintenance projects and projects required to comply with environmental, health, and safety regulations. Growth capital projects generally involve an expansion of existing capacity and/or a reduction in direct operating expenses. We undertake growth capital spending based on the expected return on incremental capital employed.

In December 2020, our Board approved the renewable diesel project at our Wynnewood Refinery, to convert the refinery's hydrocracker to a RDU capable of producing approximately 100 million gallons of renewable diesel per year. Currently, total estimated cost for the project is $175 million. The hydrocracker conversion to renewable diesel service was completed in April 2022, and we are in the process of ramping up production. In May 2021, the Board approved a $10 million capital expenditure for the completion of the design and ordering of certain long-lead equipment relating to a potential project to add pretreating capabilities for the RDU at the Wynnewood Refinery and for the completion of the design for a potential conversion of an existing hydrotreater at the Coffeyville Refinery to renewable diesel and sustainable aviation fuel services. In November 2021, the Board approved the pretreater project at the Wynnewood Refinery, which is expected to be completed in the first quarter of 2023 at an estimated cost of $60 million.

Our total capital expenditures for the three months ended March 31, 2022, along with our estimated expenditures for 2022, by segment, are as follows:

	Three Months Ended March 31, 2022 Actual			**2022 Estimate** [1]					
				Maintenance		Growth		Total	
(in millions)	Maintenance	Growth	Total	Low	High	Low	High	Low	High
Petroleum	**$ 18**	**$ 1**	**$ 19**	$ 88	$ 98	$ 3	$ 7	$ 91	$ 105
Renewables [2]	**—**	**26**	**26**	—	—	73	83	73	83
Nitrogen Fertilizer	**5**	**—**	**5**	36	39	2	3	38	42
Other	**—**	**—**	**—**	7	9	—	—	7	9
Total	**$ 23**	**$ 27**	**$ 50**	$ 131	$ 146	$ 78	$ 93	$ 209	$ 239

(1) Total 2022 estimated capitalized costs include approximately $48 million of growth related projects that will require additional approvals before commencement.
(2) Renewables reflects spending on the Wynnewood Refinery RDU project. Upon completion and meeting of certain criteria under accounting rules, Renewables is expected to be a new reportable segment. As of March 31, 2022, Renewables does not the meet the definition of a reportable segment as defined under Accounting Standards Codification 280.

Our estimated capital expenditures are subject to change due to unanticipated changes in the cost, scope, and completion time for capital projects. For example, we may experience unexpected changes in labor or equipment costs necessary to comply with government regulations or to complete projects that sustain or improve the profitability of the refineries or nitrogen fertilizer facilities. We may also accelerate or defer some capital expenditures from time to time. Capital spending for CVR Partners is determined by the board of directors of its general partner (the "UAN GP Board"). We will continue to monitor market conditions and make adjustments, if needed, to our current capital spending or turnaround plans.

The Petroleum Segment began a major scheduled turnaround at the Wynnewood Refinery in late February 2022 that was completed in early April 2022. Total capitalized expenditures for the three months ended March 31, 2022 and 2021 were $63 million and $1 million, respectively. The Petroleum Segment's next planned turnaround at the Coffeyville Refinery is currently expected to start in the spring of 2023. For the three months ended March 31, 2022, we capitalized $1 million for pre-planning expenditures.

The Nitrogen Fertilizer Segment has planned turnarounds currently scheduled at both our Coffeyville Fertilizer Facility and East Dubuque Fertilizer Facility in the summer of 2022, with an estimated cost of $12 to $15 million and $14 to $16 million, respectively. For the three months ended March 31, 2022, we incurred less than $1 million and approximately $1 million in turnaround expense related to planning for the Coffeyville Fertilizer Facility's and East Dubuque Fertilizer Facility's expected turnarounds, respectively. We will continue to monitor market conditions and make adjustments, if needed, to our current capital spending or turnaround plans.

Dividends to CVR Energy Stockholders

Dividends, if any, including the payment, amount and timing thereof, are determined in the discretion of the Board. IEP, through its ownership of the Company's common stock, is entitled to receive dividends that are declared and paid by the Company based on the number of shares held at each record date. No dividends were declared or paid during the first quarter of 2022 related to the fourth quarter of 2021, and there were no quarterly dividends declared or paid during 2021 related to the first, second, and third quarters of 2021 and fourth quarter of 2020.

On May 26, 2021, the Company announced a special dividend of approximately $492 million, or equivalent to $4.89 per share of the Company's common stock, to be paid in a combination of cash (the "Cash Distribution") and the common stock of Delek held by the Company (the "Stock Distribution"). On June 10, 2021, the Company distributed an aggregate amount of approximately $241 million, or $2.40 per share of the Company's common stock, pursuant to the Cash Distribution, and approximately 10,539,880 shares of Delek common stock, which represented approximately 14.3% of the outstanding shares of Delek common stock, pursuant to the Stock Distribution. IEP received approximately 7,464,652 shares of common stock of Delek and $171 million in cash. The Stock Distribution was recorded as a reduction to equity through a derecognition of our investment in Delek, and the Company recognized a gain of $112 million from the initial investment in Delek through the date of the Stock Distribution.

For the first quarter of 2022, the Company, upon approval by the Company's Board of Directors on May 2, 2022, declared a cash dividend of $0.40 per share, or $40 million, which is payable May 23, 2022 to shareholders of record as of May 13, 2022. Of this amount, IEP will receive $28 million due to its ownership interest in the Company's shares.

Distributions to CVR Partners' Unitholders

Distributions, if any, including the payment, amount and timing thereof, are subject to change at the discretion of the UAN GP Board. The following table presents distributions paid by CVR Partners to its unitholders, including amounts received by the Company, during 2022 and 2021 (amounts presented in tables below may not add to totals presented due to rounding).

			Distributions Paid *(in millions)*		
Related Period	**Date Paid**	**Distributions Per Common Unit**	**Public Unitholders**	**CVR Energy**	**Total**
2021 - 4th Quarter	March 14, 2022	$ 5.24	$ 36	$ 20	$ 56

Related Period	Date Paid	Distributions Per Common Unit	Distributions Paid *(in millions)* Public Unitholders	CVR Energy	Total
2021 - 2nd Quarter	August 23, 2021	$ 1.72	$ 11	$ 7	$ 18
2021 - 3rd Quarter	November 22, 2021	2.93	20	11	31
Total distributions		$ 4.65	$ 31	$ 18	$ 50

There were no distributions declared or paid by CVR Partners related to the first quarter of 2021 and fourth quarter of 2020.

For the first quarter of 2022, CVR Partners, upon approval by the UAN GP Board on May 2, 2022, declared a distribution of $2.26 per common unit, or $24 million, which is payable May 23, 2022 to unitholders of record as of May 13, 2022. Of this amount, CVR Energy will receive approximately $9 million, with the remaining amount payable to public unitholders.

Capital Structure

On October 23, 2019, the Board authorized a stock repurchase program (the “Stock Repurchase Program”). The Stock Repurchase Program would enable the Company to repurchase up to $300 million of the Company’s common stock. Repurchases under the Stock Repurchase Program may be made from time-to-time through open market transactions, block trades, privately negotiated transactions or otherwise in accordance with applicable securities laws. The timing, price and amount of repurchases (if any) will be made at the discretion of management and are subject to market conditions as well as corporate, regulatory and other considerations. While the Stock Repurchase Program currently has a duration of four years, it does not obligate the Company to acquire any stock and may be terminated by the Board at any time. As of March 31, 2022, the Company has not repurchased any of the Company’s common stock under the Stock Repurchase Program.

On May 6, 2020, CVR Partners announced that the UAN GP Board, on behalf of CVR Partners, authorized a common unit repurchase program (the “Unit Repurchase Program”), which was increased on February 22, 2021. The Unit Repurchase Program, as increased, authorized CVR Partners to repurchase up to $20 million of its common units. During the three months ended March 31, 2022 and 2021, CVR Partners repurchased 111,695 and 24,378 common units, respectively, on the open market in accordance with a repurchase agreement under Rules 10b5-1 and 10b-18 of the Securities Exchange Act of 1934, as amended, at a cost of $12 million and $1 million, respectively, exclusive of transaction costs, or an average price of $110.98 and $21.69 per common unit, respectively. As of March 31, 2022, CVR Partners, considering all repurchases made since inception of the Unit Repurchase Program, had a nominal amount in authority remaining under the Unit Repurchase Program. This Unit Repurchase Program does not obligate CVR Partners to repurchase any common units and may be cancelled or terminated by the UAN GP Board at any time.

Cash Flows

The following table sets forth our consolidated cash flows for the periods indicated below:

(in millions)	Three Months Ended March 31, 2022	2021	Change
Net cash provided by (used in):			
Operating activities	**$ 322**	$ 96	$ 226
Investing activities	**(41)**	(54)	13
Financing activities	**(115)**	(2)	(113)
Net increase in cash and cash equivalents and restricted cash	**$ 166**	$ 40	$ 126

Operating Activities

The change in operating activities for the three months ended March 31, 2022, as compared to the three months ended March 31, 2021, was primarily due to a $278 million increase in EBITDA during the first quarter of 2022 as a result of stronger operations, an increase in net non-cash deferred taxes of $73 million and a $17 million increase in non-cash share based compensation which is due to higher market prices for CVR Partners' units and CVR Energy's shares in 2022 compared to 2021. This is partially offset by a decrease in working capital of $92 million primarily associated with the increases in our open RFS position and a gain in our derivatives compared to a loss during 2021 resulting in a change of $49 million.

Investing Activities

The change in net cash used in investing activities for the three months ended March 31, 2022, as compared to the three months ended March 31, 2021 was primarily due to the acquisition of pipeline assets during 2021 of $20 million with no acquisitions in 2022, coupled with a reduction in capital expenditures of $8 million. These increases are partially offset by an increase in our turnaround expenditures of $14 million in the first quarter of 2022 compared to the same period of 2021.

Financing Activities

The change in net cash used for financing activities for the three months ended March 31, 2022, as compared to the net cash provided in financing activities for the three months ended March 31, 2021 was due to the redemption of the remaining balance of the 2023 UAN Notes during the first quarter of 2022 of $65 million, a distribution of $36 million paid by CVR Partners during the first quarter of 2022 with no distribution in 2021, and an $11 million increase in unit repurchases of CVR Partners' common unit in 2022 compared to 2021.

Critical Accounting Estimates

Our critical accounting estimates are disclosed in the "Critical Accounting Estimates" section of our 2021 Form 10-K. No modifications have been made during the three months ended March 31, 2022 to these estimates.

Item 3. *Quantitative and Qualitative Disclosures About Market Risk*

There have been no material changes to our market risks as of and for the three months ended March 31, 2022, as compared to the risks discussed in Part II, Item 7A of our 2021 Form 10-K.

Item 4. *Controls and Procedures*

Evaluation of Disclosure Controls and Procedures

The Company has evaluated, under the direction and with the participation of the Chief Executive Officer and Chief Financial Officer, the effectiveness of our disclosure controls and procedures, as defined in Exchange Act Rule 13a-15(e) and 15d-15(e). Based upon this evaluation, the Company's Chief Executive Officer and Chief Financial Officer concluded that disclosure controls and procedures were effective as of March 31, 2022.

Changes in Internal Control Over Financial Reporting

There have been no changes in our internal controls over financial reporting required by Rule 13a-15 of the Exchange Act that occurred during the fiscal quarter ended March 31, 2022 that materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. ***Legal Proceedings***

See Note 12 (“Commitments and Contingencies”) to Part I, Item 1 of this Report, which is incorporated by reference into this Part II, Item 1, for a description of certain litigation, legal, and administrative proceedings and environmental matters.

Item 1A. ***Risk Factors***

There have been no material changes from the risk factors previously disclosed in Part I, Item 1A of our 2021 Form 10-K, which risk factors could be affected by the potential effects of the Russia-Ukraine conflict. Additional risks and uncertainties, including risks and uncertainties not presently known to us, or that we currently deem immaterial, could also have an adverse effect on our business, financial condition, and/or results of operations.

Item 5. ***Other Information***

None.

Item 6. ***Exhibits***

INDEX TO EXHIBITS

Exhibit Number	Exhibit Description
4.1*	Supplemental Indenture, dated as of April 12, 2022, among CVR Renewables, LLC, CVR Energy, Inc., the existing guarantors named therein and Wells Fargo Bank, National Association, as Trustee.
10.1**	Amendment No. 1 to On-Site Product Supply Agreement among Coffeyville Resources Nitrogen Fertilizers, LLC and Messer LLC dated as of February 21, 2022 (incorporated by reference to Exhibit 10.30.1 to the Company’s Form 10-K filed on February 23, 2022).
10.2**+	Form CVR Energy, Inc. Incentive Unit Agreement (Executive) (incorporated by reference to Exhibit 10.17.2 to the Company’s Form 10-K filed on February 23, 2022).
10.3**+	Form CVR Energy, Inc. Incentive Unit Agreement (incorporated by reference to Exhibit 10.17.3 to the Company’s Form 10-K filed on February 23, 2022).
10.4**+	CVR Energy, Inc. Change in Control and Severance Plan, as amended effective January 1, 2022 (incorporated by reference to Exhibit 10.18.1 to the Company’s Form 10-K filed on February 23, 2022).
10.5**+	Form of CVR Partners, LP Long-Term Incentive Plan Employee Phantom Unit Agreement (Executive) (incorporated by reference to Exhibit 10.22.4 to the Company’s Form 10-K filed on February 23, 2022).
10.6**+	Form of CVR Partners, LP Long-Term Incentive Plan Employee Phantom Unit Agreement (incorporated by reference to Exhibit 10.22.5 to the Company’s Form 10-K filed on February 23, 2022).
10.7**+	Offer Letter, dated as of January 26, 2022, by and between CVR Services, LLC and Michael H. Wright, Jr. (incorporated by reference to Exhibit 10.49 to the Company’s Form 10-K filed on February 23, 2022).
10.8*+	CVR Energy, Inc. 2022 Performance-Based Bonus Plan, approved February 21, 2022.
10.9*+	CVR Partners, LP 2022 Performance-Based Bonus Plan, approved February 21, 2022.
10.10*+	CVR Refining, LP 2022 Performance-Based Bonus Plan, approved February 21, 2022.
10.11*Õ	Counterpart Agreement, dated April 12, 2022, by CVR Renewables, LLC to the Amended and Restated ABL Pledge and Security Agreement, dated as of December 20, 2012.
10.12*	Joinder Agreement, dated as of April 12, 2022, by CVR Renewables, LLC to the Amended and Restated ABL Credit Agreement, dated as of December 20, 2012.
10.13*	Amendment to Master Service Agreement, dated as of April 12, 2022, among CVR Services, LLC and subsidiaries of CVR Energy.
31.1*	Rule 13a-14(a)/15(d)-14(a) Certification of President and Chief Executive Officer.
31.2*	Rule 13a-14(a)/15(d)-14(a) Certification of Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary.
31.3*	Rule 13a-14(a)/15(d)-14(a) Certification of Vice President, Chief Accounting Officer and Corporate Controller.

32.1†	Section 1350 Certification of President and Chief Executive Officer, Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary, and Vice President, Chief Accounting Officer and Corporate Controller.
101*	The following financial information for CVR Energy, Inc.'s Quarterly Report on Form 10-Q for the quarter ended March 31, 2022 formatted Inline XBRL ("Extensible Business Reporting Language") includes: (i) Condensed Consolidated Balance Sheets (unaudited), (ii) Condensed Consolidated Statements of Operations (unaudited), (iii) Condensed Consolidated Statements of Comprehensive Income (unaudited), (iv) Condensed Consolidated Statement of Changes in Equity (unaudited), (v) Condensed Consolidated Statements of Cash Flows (unaudited) and (vi) the Notes to Condensed Consolidated Financial Statements (unaudited), tagged in detail.
104*	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

* Filed herewith.
** Previously filed.
† Furnished herewith.
\+ Denotes management contract or compensatory plan or arrangement.
Õ The exhibits and schedules have been omitted pursuant to Item 601(a)(5) of Regulation S-K and will be provided to the Securities and Exchange Commission upon request.

PLEASE NOTE: Pursuant to the rules and regulations of the SEC, we may file or incorporate by reference agreements as exhibits to the reports that we file with or furnish to the SEC. The agreements are filed to provide investors with information regarding their respective terms. The agreements are not intended to provide any other factual information about the Company, its business or operations. In particular, the assertions embodied in any representations, warranties and covenants contained in the agreements may be subject to qualifications with respect to knowledge and materiality different from those applicable to investors and may be qualified by information in confidential disclosure schedules not included with the exhibits. These disclosure schedules may contain information that modifies, qualifies and creates exceptions to the representations, warranties and covenants set forth in the agreements. Moreover, certain representations, warranties and covenants in the agreements may have been used for the purpose of allocating risk between the parties, rather than establishing matters as facts. In addition, information concerning the subject matter of the representations, warranties and covenants may have changed after the date of the respective agreement, which subsequent information may or may not be fully reflected in the Company's public disclosures. Accordingly, investors should not rely on the representations, warranties and covenants in the agreements as characterizations of the actual state of facts about the Company, its business or operations on the date hereof.

SIGNATURES

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.

CVR Energy, Inc.

May 3, 2022	By:	/s/ Dane J. Neumann
		Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary
		(Principal Financial Officer)
May 3, 2022	By:	/s/ Jeffrey D. Conaway
		Vice President, Chief Accounting Officer and Corporate Controller
		(Principal Accounting Officer)

Execution Version

SUPPLEMENTAL INDENTURE
TO BE DELIVERED BY SUBSEQUENT GUARANTORS

SUPPLEMENTAL INDENTURE (this "*Supplemental Indenture*"), dated as of April 12, 2022, among CVR Renewables, LLC (the "*Guaranteeing Subsidiary*"), a subsidiary of CVR Energy, Inc. (or its permitted successor), a Delaware corporation (the "*Company*"), the Company, the existing guarantors listed in Annex I (collectively, the "*Existing Guarantors*") and Wells Fargo Bank, National Association, as trustee under the Indenture referred to below (the "*Trustee*").

W I T N E S E T H

WHEREAS, the Company has heretofore executed and delivered to the Trustee an indenture (the "*Indenture*"), dated as of January 27, 2020, providing for the issuance of 5.250% Senior Notes due 2025 (the "*2025 Notes*") and the 5.750% Senior Notes due 2028 (the "*2028 Notes*" and together with the 2025 Notes, the "*Notes*");

WHEREAS, the Indenture provides that under certain circumstances the Guaranteeing Subsidiary shall execute and deliver to the Trustee a supplemental indenture pursuant to which the Guaranteeing Subsidiary shall unconditionally guarantee all of the Company's Obligations under the Notes and the Indenture on the terms and conditions set forth herein (the "*Note Guarantee*"); and

WHEREAS, pursuant to Section 9.01 of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the Guaranteeing Subsidiary and the Trustee mutually covenant and agree for the equal and ratable benefit of the Holders of the Notes as follows:

1. CAPITALIZED TERMS. Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.

2. AGREEMENT TO GUARANTEE. The Guaranteeing Subsidiary hereby agrees to provide an unconditional Guarantee on the terms and subject to the conditions set forth in the Note Guarantee and in the Indenture including but not limited to Article 10 thereof.

3. NO RECOURSE AGAINST OTHERS. No past, present or future director, officer, partner, employee, incorporator, manager or unitholder or other owner of Capital Stock of the Company or any Existing Guarantor or any direct or indirect parent of the Company, as such, will have any liability for any obligations of the Company or any Existing Guarantor under the Notes, this Indenture or the Note Guarantees, or any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes.

4. NEW YORK LAW TO GOVERN. THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

5. COUNTERPARTS. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement. The exchange of copies of this Indenture and of signature pages by facsimile or PDF transmission shall constitute effective execution and delivery of this Indenture as to the parties hereto and may be used in lieu of the original Indenture for all purposes. Signatures of the parties hereto transmitted by facsimile or PDF shall be deemed to be their original signatures for all purposes.

6. EFFECT OF HEADINGS. The Section headings herein are for convenience only and shall not affect the construction hereof.

7. THE TRUSTEE. The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiary and the Company.

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed and attested, all as of the date first above written.

CVR RENEWABLES, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary

CVR ENERGY, INC.

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary

CVR ENERGY HOLDINGS, INC.

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary

CVR SERVICES, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary

CVR REFINING GP, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary

CVR REFINING, LP

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary

CVR REFINING, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary

COFFEYVILLE RESOURCES CRUDE TRANSPORTATION, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary

COFFEYVILLE RESOURCES REFINING & MARKETING, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary

COFFEYVILLE RESOURCES PIPELINE, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary

COFFEYVILLE RESOURCES TERMINAL, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary

WYNNEWOOD ENERGY COMPANY, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary

WYNNEWOOD REFINING COMPANY, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary

COMPUTERSHARE TRUST COMPANY,
N.A. as agent for Wells Fargo Bank, National Association,

By: /s/ Jill Melhus
Authorized Signatory

CVR ENERGY, Inc, - Supplement to the Indenture
Signature Page

1. CVR Energy Holdings, Inc.
2. CVR Services, LLC
3. CVR Refining GP, LLC
4. CVR Refining, LP
5. CVR Refining, LLC
6. Coffeyville Resources Crude Transportation, LLC
7. Coffeyville Resources Refining & Marketing, LLC
8. Coffeyville Resources Pipeline, LLC
9. Coffeyville Resources Terminal, LLC
10. Wynnewood Energy Company, LLC
11. Wynnewood Refining Company, LLC

Certain identified information in this Agreement denoted with ***[REDACTED]*** has been excluded from this exhibit because it is not material and would be competitively harmful if publicly disclosed.

CVR Energy, Inc. 2022
Performance-Based Bonus Plan

Philosophy / Background
CVR Energy, Inc. (the "Company") is committed to wages and benefits that are competitive with a market-based, pay-for-performance compensation philosophy, providing such base pay, bonus and long-term incentive awards in line with those of the refining and fertilizer industries. This Performance-Based Bonus Plan (the "Plan") is intended to reward high performance employees, and to retain these employees in critical roles, through the issuance of bonus awards (each, a "Bonus").

Administration
The Plan is maintained and administered by, or under the direction of, the Compensation Committee (the "Compensation Committee") of the board of directors (the "Board") of the Company with respect to, and references to "employee" herein relate only to, eligible employees or officers of the Company and its subsidiaries, excluding any employees of (or individuals solely subject to the bonus plans of) CVR Refining, LP ("CVRR"), CVR Partners, LP ("UAN"), their respective general partners and their respective subsidiaries.

The Compensation Committee shall annually approve all salaries, targets and bonus metrics for employees in Grade E14 and above, and shall annually approve a total bonus pool for employees in Grade E13 and below. The Compensation Committee delegates to the Chief Executive the authority to approve payouts from such total bonus pool to employees in Grade E13 and below, in his sole discretion. The Chief Executive shall also be responsible for assigning salaries, bonus targets, and Grade levels to employees in Grade 13 and below.

In the event of a claim or dispute brought forth by any employee with a Grade level of E13 or below, the decision of the Chief Executive as to the facts in the case and the meaning and intent of any provision of the Plan, or its application, shall be final, binding, and conclusive. In the event of a claim or dispute brought forth by any employee with a Grade level of E14 or above, the decision of the Compensation Committee as to the facts in the case and the meaning and intent of any provision of the Plan, or its application, shall be final, binding, and conclusive.

The Plan described herein does not create a contractual obligation on the part of the Company. The Company expressly reserves the right to modify, discontinue, or otherwise change the Plan outlined in this document at the sole and absolute discretion of the Company without advance notice.

Introduction
The purpose of the Plan and any Bonus to be paid hereunder is to enhance the Company's ability to attract, motivate, reward and retain employees, and to strengthen their commitment to the success of the Company.

Eligibility and Administration
Bonuses are made based on the applicable calendar year during which the employees performed the services and are generally paid (to the extent payable) after the financials have been audited and within 90 days of the end of the calendar year (the "Performance Period" or "Period").

Generally, only exempt, non-exempt and non-union hourly employees are eligible to receive a Bonus, provided that, to receive a Bonus, an employee must: (i) be actively employed with the Company for at least 180 days during the calendar year; (ii) consistently perform at or above expectations for their role; (iii) be actively employed on the date of payout and not on a performance improvement plan or in corrective or disciplinary action status as a result of poor performance during the Performance Period. Employees hired prior to October 1 during the Performance Period will be eligible to receive a Bonus provided the above requirements (ii) and (iii) are met.

Subject to annual review, Bonuses are computed in accordance with each eligible employee's Grade (as shown in Appendix A), prorated for time in an eligible position, as well as a performance multiplier of zero to 150 percent, based on performance against the achievement of the allocated Company and individual performance measures described herein. Appendices A-E present: the overall compensation structure (Appendix A), example calculations (Appendices B, C), eligibility (Appendix D) and bonus payout measures (Appendix E). The Individual Performance Multiplier component of a Bonus, if any, is entirely discretionary.

In addition, if the Adjusted EBITDA Threshold established for the Company for a given Performance Period is not reached, no Bonus will be paid for the Period, subject to Compensation Committee discretion. The Compensation Committee may, in its sole and absolute discretion, wave the Adjusted EBITDA threshold requirement, increase, decrease, or otherwise adjust performance measures, targets, and payout ranges used hereunder, as a result of extraordinary or non-recurring events, changes in applicable accounting rules or principles, changes in the Company's methods of accounting, changes in applicable law, changes due to consolidations, growth capital spend programs, acquisitions, or reorganizations affecting the Company and its subsidiaries and affiliates, or other similar changes in the Company's business.

Company Performance: Environmental Health & Safety (EH&S) Measures – 25%
EH&S measures are as follows (see appendix F for definitions):

- Personal Safety – Total Recordable Injury Rate (TRIR);
- Process Safety – Process Safety Incident Rate (PSIR); and
- Environmental Events (EE).

Company Performance: Financial Measures – 75%
Financial measures are objectives related to the following (see appendix F for definitions):

- Reliability;
- Equipment Utilization;
- Operating Expense; and
- Return on Capital Employed.

Spot Bonus

Introduction
Employees making an extraordinary contribution to the furtherance of Company financial performance or advances in Company culture may be nominated by their manager or executive sponsor for a Bonus on a spot basis (a "Spot Bonus"), subject to approval by the Chief Executive. Spot Bonuses will be limited to employees in salary grades E13 and below and a maximum value of five thousand dollars ($5,000).

Terms and Conditions of Spot Bonus
Except as specifically set forth herein, the foregoing provisions of the Plan will likewise apply to a Spot Bonus. For the avoidance of doubt, these provisions relate to, among others, forfeiture and/or recoupment, amendment or termination, tax withholding, data protection and consent and governing law.

General Provisions

See Appendix F for definitions relating to the Plan.

Participation in the Plan is subject to (i) each individual employee's compliance with the Company's mission and values, its code of ethics and its policies and procedures, including, without limitation, the Corporate Policies and Procedures and employee handbook (collectively, "Company Policies"), and (ii) the Clawback and Recoupment Policy attached as Appendix G.

Each employee that is eligible and receives a Bonus or Spot Bonus will be liable for any and all federal, state, provincial, local or foreign taxes, pension plan contributions, employment insurance premiums, social insurance contributions, amounts payable to a governmental and/or regulatory body in the employee's country and other levies of any kind required by applicable laws to be deducted or withheld with respect to any such award (collectively, the "Withholding Taxes"). The Company will have the right to deduct and withhold all required Withholding Taxes from any payment or other consideration deliverable to an employee pursuant to any such payment. All awards under the Plan are intended to be exempt from Section 409A of the Internal Revenue Code of 1986, as amended, and shall be construed and interpreted in accordance with such intent.

Participation in the Plan does not confer upon any employee any right to continue in the employ of the Company or its subsidiaries, nor interfere in any way with the right of the Company and its subsidiaries to terminate any employee's employment at any time. The Company and its subsidiaries are under no obligation to continue the Plan in future years.

The Compensation Committee may at any time, or from time to time, in its sole and absolute discretion, (a) amend, alter or modify the provisions of this Plan, (b) terminate this Plan, or (c) terminate the participation of an employee or group of employees in this Plan; provided, however, that in the event of the termination of the Plan or a termination of participation, the Compensation Committee, in its sole and absolute discretion, may determine that a prorated award is payable to employees who were participants in this Plan under such terms and conditions as established by the Compensation Committee.

Notwithstanding anything herein to the contrary, whether or not any payment or award is authorized, earned or paid under the Plan will be determined by the Compensation Committee in its sole and absolute discretion, and no such payment or award shall be earned, nor shall any right to any such payment or award exist or accrue, unless, among other factors, such payment or award has been authorized by the Compensation Committee in its sole and absolute discretion, and actually paid to the employee. In addition, whether or not any payment or award is authorized, earned or paid pursuant to the Plan is without regard to whether any of the individual performance metrics, financial performance targets and/or goals, or any other benchmarks, targets, personal goals or criteria set forth in the Plan are met, not met, exceeded or not exceeded.

No employee, beneficiary or other person shall have any right, title or interest in any amount awarded under the Plan prior to the payment of such award to him or her. An employee's rights to a payment under the Plan are no greater than those of unsecured general creditors of the Company or its subsidiaries.

By participating in the Plan, each employee consents to the holding and processing of personal information provided by such employee to the employer, any affiliate of the employer, trustee or third party service provider, for all purposes relating to the operation of the Plan. Consents include, but are not limited to: (i) administering and maintaining employee records; (ii) providing information to the employer, its affiliates, trustees of any employee benefit trust, registrars, brokers or third party administrators of the Plan; (iii) providing information to future purchasers or merger partners of the employer or any of its affiliates, or the business in which the employee works; and (iv) to the extent not prohibited by applicable law, transferring information about the employee to any country or territory that may not provide the same protection for the information as the employee's home country.

The Plan is governed by the laws of the State of New York and as such will be construed under and in accordance with the laws of the State of New York without regard to conflicts of law.

Appendix A
Compensation Structure: Base Pay & Incentive Plans

[TABLE REDACTED]

Individual Performance Measures
Supervisor's assessment of employee's performance will be based on the following categories:

- Interpersonal effectiveness
- Business conduct
- Professional and technical development
- Leadership
- Achievement of goals
- Results orientation

The assessment is discretionary and based on a wide range of considerations which often change over the course of the year.

Appendix B
Bonus Payout and Company Performance Calculations

Bonus Payout Calculation:

Eligible Compensation	X	Target Bonus % based on Salary Grade	X	[	Company Performance Allocation* (0-100%)	X	Company Performance Multiplier (0-150%)	+	Individual Performance Allocation* (0-100%)	X	Individual Performance Multiplier (0-150%)	]	

*Company Performance Allocation + Individual Performance Allocation = 100%

Allocations are based on employee salary grade

****Company Performance Multiplier:**

25%	X	EH&S Achievement (0-150%)	+	75%	X	[	25% X	Reliability (0-150%)	+	25% X	Equipment Utilization (0-150%)	+	25% X	Operating Expense (0-150%)	+ 25% X	ROCE (0-150%)	]

Appendix C
Bonus Payout Examples

Example Bonus Calculation 1:														
Salary Grade	E12													
Eligible Compensation	$196,000	**Eligible Compensation**		**Bonus Target %**			**Co. Perf. Alloc.**		**Co. Perf. Multiplier**		**Ind. Perf. Alloc.**		**Ind. Perf. Multiplier**	
Performance Rating	Exceeds	$196,000	X	40%	X	(	50%	X	110%	+	50%	X	125%	)
Bonus Target %	40%													
Company Performance Allocation	50%		=	$92,120										
Company Performance Multiplier (0-150%)	110%													
Individual Performance Allocation	50%													
Individual Performance Multiplier (0-150%)	125%													
Example Bonus Calculation 2:														
Salary Grade	E06													
Eligible Compensation	$90,000	**Eligible Compensation**		**Bonus Target %**			**Ind. Perf. Alloc.**		**Ind. Perf. Multiplier**					
Performance Rating	Far Exceeds	$90,000	X	14%	X	(	100%	X	150%	)				
Bonus Target %	14%													
Company Performance Allocation	N/A		=	$18,900										
Company Performance Multiplier (0-150%)	N/A													
Individual Performance Allocation	100%													
Individual Performance Multiplier (0-150%)	150%													
Example Bonus Calculation 3:														
Hourly Non-Represented	Hrly Non-Rep													
Eligible Compensation	$70,000	**Eligible Compensation**		**Bonus Target %**			**Co. Perf. Alloc.**		**Co. Perf. Multiplier**					
Performance Rating	None	$70,000		6%	X	(	100%	X	110%	)				
Bonus Target %	6%													
Company Performance Allocation	100%		=	$4,620										
Company Performance Multiplier (0-150%)	110%													
Individual Performance Allocation	N/A													
Individual Performance Multiplier (0-150%)	N/A													

Appendix D
CVR Energy, Inc.

Eligibility
Non-union General & Administrative and Shared Services employees of the Company and its subsidiaries, including Executive, Legal, Communications, Risk Management, Flight Operations, Finance & Accounting, Treasury, Investor Relations, Tax, IT, Financial Planning & Analysis, Human Resources, Internal Audit, Procurement, Environmental Health & Safety and Ranch Management, but excluding anyone not an eligible employee as described in the Plan.

Company Performance: Bonus Payout
The Company Performance Multiplier for the Performance Period will be derived from the corresponding outcomes for CVRR and UAN (Appendix E) as follows for the Period:
- Weighted based on man-hours worked for the Total Recordable Incident Rate and Process Safety Incident Rate Measures
- Weighted based on Adjusted EBITDA for the Environmental Events Measure and all Financial Measures

Appendix E
CVR Refining, LP and CVR Partners, LP
Bonus Payout Measures

<u>Environmental Health & Safety (EH&S) Measures (25%)</u>
Three measures evenly weighted (33-1/3% each): Total Recordable Incident Rate (TRIR), Process Safety Tier I Incident Rate (PSIR), and Environmental Events (EE):

Percentage Change (over the prior year)	Bonus Achievement
Increase in Incident Rate or Incidents	Zero
0%	50% of Target Percentage (Threshold)
Decrease > 0% and < 3%	Linear Interpolation between Threshold and Target
Decrease of 3%	Target Percentage
Decrease > 3% and < 10%	Linear Interpolation between Target and Maximum
Decrease of 10% or more, or if TRIR is maintained at or below 1.0, PSIR at or below 0.2 and EE at or below 20	150% of Target (Maximum)

<u>Financial Measures (75%)</u>
Four measures evenly weighted (25% each):

Reliability	Bonus Achievement
Greater than 8.0%	Zero
8.00%	50% of Target Percentage (Threshold)
6.01% to 7.99%	Linear Interpolation between Threshold and Target
6.00%	Target Percentage
5.0% to 5.99%	Linear Interpolation between Target and Maximum
Less than 5.0%	150% of Target (Maximum)

Equipment Utilization	Bonus Achievement
Less than 95%	Zero
95%	50% of Target Percentage (Threshold)
95.01% to 99.99%	Linear Interpolation between Threshold and Target
100%	Target Percentage
100.01% to 104.99%	Linear Interpolation between Target and Maximum
Greater than 105%	150% of Target (Maximum)

Operating Expense	Bonus Achievement
Greater than 103.0%	Zero
103%	50% of Target Percentage (Threshold)
100.1% to 102.99%	Linear Interpolation between Threshold and Target
100%	Target Percentage
95.0% to 99.99%	Linear Interpolation between Target and Maximum
Less than 95%	150% of Target (Maximum)

CVRR and UAN ROCE (Ranking vs. Peer Group**)	Bonus Achievement
First (highest)	150% of Target (Maximum)
Second	125% of Target Percentage
Third	112.5% of Target Percentage
Fourth	Target Percentage (100%)
Fifth	75% of Target Percentage
Sixth	50% of Target Percentage (Minimum)
Seventh	Zero

Performance measures subject to peer group ranking will be based on LTM data as of September 30 of the Performance Period.

*The Refining Industry peer group will include Valero, Marathon, PBF Energy, Delek, Holly Frontier and Par Pacific.

**The Fertilizer Industry peer group will consist of CF Industries, LSB Industries, Nutrien Ltd., The Andersons, Inc., Green Plains Partners and Flotek Industries.

Appendix F
Definitions

"Adjusted EBITDA" for the Company means the Adjusted EBITDA under the CVRR LP Performance-Based Bonus Plan and the UAN Performance-Based Bonus Plan, weighted on an absolute basis.

"Adjusted EBITDA Threshold" means actual maintenance and sustaining capital expenditures plus reserves for turnaround expenses plus interest on debt for the given Performance Period, and board-directed actions. ***[REDACTED]*** The same procedure will be used for UAN as for CVRR.

"Chief Executive" means the President and Chief Executive Officer of the Company.

"Eligible Compensation" means (i) for eligible exempt employees, such employee's base salary at the time the Bonus or Spot Bonus is determined (prorated for time in an eligible position), and (ii) for eligible non-exempt and non-union hourly employees, such employees' eligible wages for the applicable year as determined by the Company to be required by law.

"Environmental Events" ("EE") means the total number of reportable quantities and water deviations.

- Reportable quantities are releases of substances during a 24-hour period that exceed a federal, state or local reporting threshold.
    - Reportable quantity is an event or contemporaneous combination of events during at 24-hour period that results in a release that exceeds a reportable quantity or quantities of a EPCRA/CERCLA compound as defined in the EPA List of Lists <u>or</u> a release that exceeds any other federal, state or local reporting threshold. Federally permitted releases and continuous releases defined in 40 CFR §302.6 and §302.8 are not considered reportable quantities under this measure.
    - A reportable quantity is counted by event or contemporaneous combination of events, not by the number of individual reports that are filed or number of compounds which exceed their reportable quantity. Events are considered contemporaneous if they occur within 24-hours or when a common cause results in one or more reportable quantities during contiguous or overlapping 24-hour periods.
- Water deviations are exceedances of a NPDES-based permit limit, wastewater bypasses and sheens to water of the United States.
    - The number of deviations is based on the number of individual permit limits exceeded irrespective of the number of causal events attributed to the deviation. However, a continuance of an ongoing permit limit deviation would not be double-counted if it were contemporaneous with a prior deviation and/or event.
    - Oil sheens and reportable quantities to water are only counted once as a water deviation environmental event.

A single event that results in multiple reportable quantities and/or when a water deviation is also a regulatory reportable quantity is not "double-counted" and will only be considered one Environmental Event.

"Executive Officer" of the Company means an "executive officer" as that term is defined in Rule 3b-7 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") or an "officer" of the Company for purposes of Section 16 of the Exchange Act.

"Equipment Utilization" means (i) for CVRR, actual throughput for the Performance Period divided by the planned throughput for the Performance Period, and (ii) for UAN, adjusted equivalent tons of urea ammonium nitrate production divided by the planned equivalent tons of production for the Performance Period, in each case, as adjusted at the discretion of the Compensation Committee for events or downtime caused by third parties. Planned throughput and production is reflected in the Company's annual volumetric plan. Monthly targets may be adjusted on a month by month basis to optimize production for which there is an economic incentive to do so during the given period. In such cases, the annual volumetric plan will be adjusted for the purposes of Bonus calculations with the new targets in place of the original targets.

"Operating Expense" means measurement of actual controllable and fixed operating costs divided by budgeted amounts. For purposes of calculating the Bonus, budgeted amounts are subject to revision by the Board in its discretion based on changes in business conditions or configuration of the business (e.g., items such as acquisitions or divestitures, unusual or non-recurring charges and changes in staffing relating to changed strategy approved by the Board will be considered as items for potential adjustment).

“Process Safety Incident Rate” (“PSIR”) means a standardized measure of process safety performance for the number of process safety tier 1 events per 100 full-time equivalent employees, as defined in the recommended practice for process safety performance indicators, ANSI/API RP 754.
A process safety tier 1 event is an unplanned or uncontrolled loss of primary containment of any material, including non-toxic and non-flammable materials, from a process that results in one or more consequences, including:

- an employee, contractor or subcontractor “days away from work” injury and/or fatality;
- a hospital admission and/or fatality or a third-party;
- an officially declared community evacuation or community shelter-in-place;
- a fire or explosion resulting in greater than or equal to $25,000 of direct cost to the company;
- an officially declared community evacuation or community shelter-in-place;
- a pressure relief device (PRD) discharge to atmosphere whether directly or via a downstream destructive device that results in one or more of four defined consequences and a PRD discharge quantity greater than defined threshold quantities in a one-hour period; or,
- a release of material greater than defined threshold quantities described in any one-hour period.

“Reliability” means Lost Profit Opportunity (“LPO”), defined as foregone refining margin that results from operational variance due to factors within the Company’s control, specifically including human and equipment performance, divided by the sum of actual refining margin plus LPO.

“Return on Capital Employed” (“ROCE”) means operating income before depreciation and amortization (excluding asset impairments, non-cash asset write-downs and inventory valuation gains or losses) divided by average Capital Employed during the Period (averages calculated using 5-quarter end balances for the measurement period).

“Capital Employed” means the total assets, less current liabilities (adjusted for any asset or inventory valuations imputed on operating income).
“Total Recordable Injury Rate” (“TRIR”) means a standardized measure of safety performance for the number of work-related injuries per 100 full-time equivalent employees, as defined by OSHA.

“Throughput” means total crude oil and other feedstocks charged to the refinery including isobutane, normal butane, natural gasoline, gas oil, biodiesel and ethanol used for blending.

Appendix G
Clawback and Recoupment Policy

This Clawback and Recoupment Policy applies to each Bonus and Spot Bonus (for purposes of this Plan, an “Award”).

If the Compensation Committee in its sole and absolute discretion, determines that (i) there has been misconduct or a gross dereliction of duty resulting in either a violation of law or Company Policy, that, in either case, causes significant financial or reputational harm to the Company (or any of its affiliates), and that an employee committed the misconduct or gross dereliction of duty, or failed in his or her responsibility to manage or monitor the applicable conduct or risk; (ii) an employee has committed an immoral act which is reasonably likely to impair the reputation of the Company (or any of its affiliates); (iii) an employee committed, or was indicted for, a felony or any crime involving fraud or embezzlement or dishonesty or was convicted of, or entered a plea of *nolo contendere* to a misdemeanor (other than a traffic violation) punishable by imprisonment under federal, state or local law; (iv) an employee violated any securities or employment laws or regulations; (v) an employee materially breached a Company Policy or any non-compete and/or non-solicitation clause included in an agreement or offer letter with such employee’s employer; (vi) an employee embezzled and/or misappropriated any property of the Company (or any of its affiliates) or committed any act involving fraud with respect to the Company (or any of its affiliates); or (vii) an employee engaged in conduct (including by omission) or an event or condition has occurred, which, in each case, would have given the Company or its subsidiaries the right to terminate the employee’s employment for Cause (as defined herein), then, to the extent not prohibited by applicable law, such Compensation Committee, in its sole and absolute discretion, may cancel, declare forfeited, or rescind such Award, or may seek reimbursement from such employee (and such employee will be obligated to repay) all or any portion of any payments made to such employee in respect of such Award.

If the Compensation Committee determines, in its sole and absolute discretion, that calculations underlying the performance measures and targets, including but not limited to mistakes in the Company’s financial statements, were incorrect, then such Compensation Committee may, in its sole and absolute discretion, seek to recover the amount of any payment made to employees that exceeded the amount that would have been paid based on the corrected calculations.

To the extent not prohibited by applicable law, if an employee is an officer, or, if applicable, has otherwise been designated by the Board of the Company as an Executive Officer, the Board may seek reimbursement of any payment made to such employee in respect of an Award in the event of a restatement of such Company’s (or any of its subsidiaries’) financial results (occurring due to material noncompliance with any financial reporting requirements under applicable securities laws) that reduced a previously granted payment made to such employee in respect of an Award. In that event, the Compensation Committee may, in its sole and absolute discretion, seek to recover the amount of any such payment made to the employee that exceeded the amount that would have been paid based on the restated financial results.

If the Company subsequently determines that it is required by law to apply a “clawback” or alternate recoupment provision to an Award, under the Dodd-Frank Wall Street Reform and Consumer Protection Act or otherwise, then such clawback or recoupment provision also shall apply to such Award, as if it had been included on the effective date of such Award.

To the extent not prohibited under applicable law, the Company (or any of its subsidiaries) (as applicable), in its sole and absolute discretion, will have the right to set off (or cause to be set off) any amounts otherwise due to employee from such Company or a subsidiary in satisfaction of any repayment obligation of such employee hereunder, provided that any such amounts are exempt from, or set off in a manner intended to comply with the requirements of Section 409A of the Internal Revenue Code of 1986, as amended.

For the avoidance of doubt, the Company’s and its subsidiaries’ rights under this Plan will apply to employees, without regard to whether any such employee is currently providing, or previously provided, services to the Company or its subsidiary as an employee.

“Cause” for purposes of any Award means such employee’s (i) refusal or neglect to perform substantially his or her employment-related duties or services, (ii) personal dishonesty, incompetence, willful misconduct or breach of fiduciary duty, (iii) indictment for, conviction of or entering a plea of guilty or nolo contendere to a crime constituting a felony or his or her willful violation of any applicable law (other than a traffic violation or other offense or violation outside of the course of employment or services to the Company or its affiliates which in no way adversely affects the Company and its affiliates or their reputation or the ability of the employee to perform his or her employment-related duties or services or to represent the Company or any affiliate of the Company that employs such employee or to which the employee performs services), (iv) failure to reasonably cooperate, following a request to do so by the Company, in any internal or governmental investigation of the Company or any of its affiliates or (v) material breach of any written covenant or agreement with the Company or any of its affiliates not to disclose any information pertaining to the Company or such affiliate or not to compete or interfere with the Company or such affiliate; provided that, in the case of any employee who, as of the date of determination, is party to an effective services, severance or employment agreement with the Company or any affiliate, “Cause” will have the meaning, if any, specified in such agreement.

Certain identified information in this Agreement denoted with ***[REDACTED]*** has been excluded from this exhibit because it is not material and would be competitively harmful if publicly disclosed.

CVR Partners, LP 2022
Performance-Based Bonus Plan

Philosophy / Background
CVR Partners, LP (the "Company") is committed to wages and benefits that are competitive with a market-based, pay-for-performance compensation philosophy, providing such base pay, bonus and long-term incentive awards in line with those of the fertilizer industry. This Performance-Based Bonus Plan (the "Plan") is intended to reward high performance employees, and to retain these employees in critical roles, through the issuance of bonus awards (each, a "Bonus").

Administration
The Plan is maintained and administered by, or under the direction of, the Compensation Committee (the "Compensation Committee") of the board of directors (the "Board") of the general partner of the Company with respect to, and references to "employee" herein relate only to, eligible employees or officers of the Company and its general partner and subsidiaries, excluding any employees of (or individuals solely subject to the bonus plans of) CVR Energy, Inc. ("CVI"), CVR Refining, LP ("CVRR"), their respective general partners and their respective subsidiaries.

The Compensation Committee shall annually approve all salaries, targets and bonus metrics for employees in Grade E14 and above, and shall annually approve a total bonus pool for employees in Grade E13 and below. The Compensation Committee delegates to the Chief Executive the authority to approve payouts from such total bonus pool to employees in Grade E13 and below, in his sole discretion. The Chief Executive shall also be responsible for assigning salaries, bonus targets, and Grade levels to employees in Grade 13 and below.

In the event of a claim or dispute brought forth by any employee with a Grade level of E13 or below, the decision of the Chief Executive as to the facts in the case and the meaning and intent of any provision of the Plan, or its application, shall be final, binding, and conclusive. In the event of a claim or dispute brought forth by any employee with a Grade level of E14 or above, the decision of the Compensation Committee as to the facts in the case and the meaning and intent of any provision of the Plan, or its application, shall be final, binding, and conclusive.

The Plan described herein does not create a contractual obligation on the part of the Company. The Company expressly reserves the right to modify, discontinue, or otherwise change the Plan outlined in this document at the sole and absolute discretion of the Company without advance notice.

Introduction
The purpose of the Plan and any Bonus to be paid hereunder is to enhance the Company's ability to attract, motivate, reward and retain employees, and to strengthen their commitment to the success of the Company.

Eligibility and Administration
Bonuses are made based on the applicable calendar year during which the employees performed the services and are generally paid (to the extent payable) after the financials have been audited and within 90 days of the end of the calendar year (the "Performance Period" or "Period").

Generally, only exempt, non-exempt and non-union hourly employees are eligible to receive a Bonus, provided that, to receive a Bonus, an employee must: (i) be actively employed with the Company for at least 180 days during the calendar year; (ii) consistently perform at or above expectations for their role; (iii) be actively employed on the date of payout and not on a performance improvement plan or in corrective or disciplinary action status as a result of poor performance during the Performance Period. Employees hired prior to October 1 during the Performance Period will be eligible to receive a Bonus provided the above requirements (ii) and (iii) are met.

Subject to annual review, Bonuses are computed in accordance with each eligible employee's Grade (as shown in Appendix A), prorated for time in an eligible position, as well as a performance multiplier of zero to 150 percent, based on performance against the achievement of the allocated Company and individual performance measures described herein. Appendices A-E present the overall compensation structure (Appendix A), example calculations (Appendices B, C), eligibility (Appendix D) and bonus payout measures (Appendix E). The Individual Performance Multiplier component of a Bonus, if any, is entirely discretionary.

In addition, if the Adjusted EBITDA Threshold established for the Company for a given Performance Period is not reached, no Bonus will be paid for the Period, subject to Compensation Committee discretion. The Compensation Committee may, in its sole and absolute discretion, wave the Adjusted EBITDA threshold requirement, increase, decrease, or otherwise adjust performance measures, targets, and payout ranges used hereunder, as a result of extraordinary or non-recurring events, changes in applicable accounting rules or principles, changes in the Company's methods of accounting, changes in applicable law, changes due to consolidations, growth capital spend programs, acquisitions, or reorganizations affecting the Company and its subsidiaries and affiliates, or other similar changes in the Company's business.

Company Performance: Environmental Health & Safety (EH&S) Measures – 25%
EH&S measures are as follows (see Appendix F for definitions):
- Personal Safety – Total Recordable Injury Rate (TRIR);
- Process Safety – Process Safety Incident Rate (PSIR); and
- Environmental Events (EE).

Company Performance: Financial Measures – 75%
Financial measures are objectives related to the following (see Appendix F for definitions):
- Reliability;
- Equipment Utilization;
- Operating Expense; and
- Return on Capital Employed.

Spot Bonus

Introduction
Employees making an extraordinary contribution to the furtherance of Company financial performance or advances in Company culture may be nominated by their manager or executive sponsor for a Bonus on a spot basis (a "Spot Bonus"), subject to approval by the Chief Executive. Spot Bonuses will be limited to employees in salary grades E13 and below and a maximum value of five thousand dollars ($5,000).

Terms and Conditions of Spot Bonus
Except as specifically set forth herein, the foregoing provisions of the Plan will likewise apply to a Spot Bonus. For the avoidance of doubt, these provisions relate to, among others, forfeiture and/or recoupment, amendment or termination, tax withholding, data protection and consent and governing law.

General Provisions

See Appendix F for definitions relating to the Plan.

Participation in the Plan is subject to (i) each individual employee's compliance with the Company's mission and values, its code of ethics and its policies and procedures, including, without limitation, the Corporate Policies and Procedures and employee handbook (collectively, "Company Policies"), and (ii) the Clawback and Recoupment Policy attached as Appendix G.

Each employee that is eligible and receives a Bonus or Spot Bonus will be liable for any and all federal, state, provincial, local or foreign taxes, pension plan contributions, employment insurance premiums, social insurance contributions, amounts payable to a governmental and/or regulatory body in the employee's country and other levies of any kind required by applicable laws to be deducted or withheld with respect to any such award (collectively, the “Withholding Taxes”). The Company will have the right to deduct and withhold all required Withholding Taxes from any payment or other consideration deliverable to an employee pursuant to any such payment. All awards under the Plan are intended to be exempt from Section 409A of the Internal Revenue Code of 1986, as amended, and shall be construed and interpreted in accordance with such intent.

Participation in the Plan does not confer upon any employee any right to continue in the employ of the Company or its subsidiaries, nor interfere in any way with the right of the Company and its subsidiaries to terminate any employee’s employment at any time. The Company and its subsidiaries are under no obligation to continue the Plan in future years.

The Compensation Committee may at any time, or from time to time, in its sole and absolute discretion, (a) amend, alter or modify the provisions of this Plan, (b) terminate this Plan, or (c) terminate the participation of an employee or group of employees in this Plan; provided, however, that in the event of the termination of the Plan or a termination of participation, the Compensation Committee, in its sole and absolute discretion, may determine that a prorated award is payable to employees who were participants in this Plan under such terms and conditions as established by the Compensation Committee.

Notwithstanding anything herein to the contrary, whether or not any payment or award is authorized, earned or paid under the Plan will be determined by the Compensation Committee in its sole and absolute discretion, and no such payment or award shall be earned, nor shall any right to any such payment or award exist or accrue, unless, among other factors, such payment or award has been authorized by the Compensation Committee in its sole and absolute discretion, and actually paid to the employee. In addition, whether or not any payment or award is authorized, earned or paid pursuant to the Plan is without regard to whether any of the individual performance metrics, financial performance targets and/or goals, or any other benchmarks, targets, personal goals or criteria set forth in the Plan are met, not met, exceeded or not exceeded.

No employee, beneficiary or other person shall have any right, title or interest in any amount awarded under the Plan prior to the payment of such award to him or her. An employee’s rights to a payment under the Plan are no greater than those of unsecured general creditors of the Company or its subsidiaries.

By participating in the Plan, each employee consents to the holding and processing of personal information provided by such employee to the employer, any affiliate of the employer, trustee or third party service provider, for all purposes relating to the operation of the Plan. Consents include, but are not limited to: (i) administering and maintaining employee records; (ii) providing information to the employer, its affiliates, trustees of any employee benefit trust, registrars, brokers or third party administrators of the Plan; (iii) providing information to future purchasers or merger partners of the employer or any of its affiliates, or the business in which the employee works; and (iv) to the extent not prohibited by applicable law, transferring information about the employee to any country or territory that may not provide the same protection for the information as the employee’s home country.

The Plan is governed by the laws of the State of New York and as such will be construed under and in accordance with the laws of the State of New York without regard to conflicts of law.

Appendix A
Compensation Structure: Base Pay & Incentive Plans

[TABLE REDACTED]

Individual Performance Measures
Supervisor's assessment of employee's performance will be based on the following categories:
- Interpersonal effectiveness
- Business conduct
- Professional and technical development
- Leadership
- Achievement of goals
- Results orientation

The assessment is discretionary and based on a wide range of considerations which often change over the course of the year.

Appendix B
Bonus Payout and Company Performance Calculations

Bonus Payout Calculation:

Eligible Compensation	X	Target Bonus % based on Salary Grade	X	[	Company Performance Allocation* (0-100%)	X	Company Performance Multiplier (0-150%)	+	Individual Performance Allocation* (0-100%)	X	Individual Performance Multiplier (0-150%)	]

*Company Performance Allocation + Individual Performance Allocation = 100%
Allocations are based on employee salary grade

****Company Performance Multiplier:**

25%	X	EH&S Achievement (0-150%)	+	75%	X	[	25%	X	Reliability (0-150%)	+	25%	X	Equipment Utilization (0-150%)	+	25%	X	Operating Expense (0-150%)	+	25% X	ROCE (0-150%)]

Appendix C
Bonus Payout Examples

Example Bonus Calculation 1:														
Salary Grade	E12													
Eligible Compensation	$196,000	**Eligible Compensation**		**Bonus Target %**			**Co. Perf. Alloc.**		**Co. Perf. Multiplier**		**Ind. Perf. Alloc.**		**Ind. Perf. Multiplier**	
Performance Rating	Exceeds	$196,000	X	40%	X	(	50%	X	110%	+	50%	X	125%	)
Bonus Target %	40%													
Company Performance Allocation	50%		=	$92,120										
Company Performance Multiplier (0-150%)	110%													
Individual Performance Allocation	50%													
Individual Performance Multiplier (0-150%)	125%													
Example Bonus Calculation 2:														
Salary Grade	E06													
Eligible Compensation	$90,000	**Eligible Compensation**		**Bonus Target %**			**Ind. Perf. Alloc.**		**Ind. Perf. Multiplier**					
Performance Rating	Far Exceeds	$90,000	X	14%	X	(	100%	X	150%	)				
Bonus Target %	14%													
Company Performance Allocation	N/A		=	$18,900										
Company Performance Multiplier (0-150%)	N/A													
Individual Performance Allocation	100%													
Individual Performance Multiplier (0-150%)	150%													
Example Bonus Calculation 3:														
Hourly Non-Represented	Hrly Non-Rep													
Eligible Compensation	$70,000	**Eligible Compensation**		**Bonus Target %**			**Co. Perf. Alloc.**		**Co. Perf. Multiplier**					
Performance Rating	None	$70,000		6%	X	(	100%	X	110%	)				
Bonus Target %	6%													
Company Performance Allocation	100%		=	$4,620										
Company Performance Multiplier (0-150%)	110%													
Individual Performance Allocation	N/A													
Individual Performance Multiplier (0-150%)	N/A													

Appendix D
CVR Partners, LP

Eligibility
Non-union direct employees of Company, its general partner and their respective subsidiaries, including Fertilizer Executives, Marketing, Logistics, Company Controller, Coffeyville Nitrogen Planning and East Dubuque Nitrogen Fertilizers Planning, and any employee of any affiliated entity deemed by the Chief Executive in their sole discretion to be solely dedicated to the Company or its subsidiaries, but excluding anyone not an eligible employee as described in the Plan.

Appendix E
CVR Partners, LP
Bonus Payout Measures

Environmental Health & Safety (EH&S) Measures (25%)
Three measures evenly weighted (33-1/3% each): Total Recordable Incident Rate (TRIR), Process Safety Tier I Incident Rate (PSIR), and Environmental Events (EE):

Percentage Change(over the prior year)	Bonus Achievement
Increase in Incident Rate or Incidents	Zero
0%	50% of Target Percentage (Threshold)
Decrease > 0% and < 3%	Linear Interpolation between Threshold and Target
Decrease of 3%	Target Percentage
Decrease > 3% and < 10%	Linear Interpolation between Target and Maximum
Decrease of 10% or more, or if TRIR is maintained at or below 1.0, PSIR at or below 0.2 and EE at or below 20	150% of Target (Maximum)

Financial Measures (75%)
Four measures evenly weighted (25% each):

Reliability	Bonus Achievement
Greater than 8.0%	Zero
8.00%	50% of Target Percentage (Threshold)
6.01% to 7.99%	Linear Interpolation between Threshold and Target
6.00%	Target Percentage
5.0% to 5.99%	Linear Interpolation between Target and Maximum
Less than 5.0%	150% of Target (Maximum)

Equipment Utilization	Bonus Achievement
Less than 95%	Zero
95%	50% of Target Percentage (Threshold)
95.01% to 99.99%	Linear Interpolation between Threshold and Target
100%	Target Percentage
100.01% to 104.99%	Linear Interpolation between Target and Maximum
Greater than 105%	150% of Target (Maximum)

Operating Expense	Bonus Achievement
Greater than 103.0%	Zero
103%	50% of Target Percentage (Threshold)
100.1% to 102.99%	Linear Interpolation between Threshold and Target
100%	Target Percentage
95.0% to 99.99%	Linear Interpolation between Target and Maximum
Less than 95%	150% of Target (Maximum)

ROCE (Ranking vs. Peer Group*)	Bonus Achievement
First (highest)	150% of Target (Maximum)
Second	125% of Target Percentage
Third	112.5% of Target Percentage
Fourth	Target Percentage (100%)
Fifth	75% of Target Percentage
Sixth	50% of Target Percentage (Minimum)
Seventh	Zero

Performance measures subject to peer group ranking will be based on LTM data as of September 30 of the Performance Period.

*The Fertilizer Industry peer group will consist of CF Industries, LSB Industries, Nutrien Ltd., The Andersons, Inc., Green Plains Partners and Flotek Industries.

Appendix F
Definitions

"Adjusted EBITDA" for the Company means earnings before interest, taxes, depreciation and amortization, and adjusted for inventory valuation impacts, unrealized gains and losses on derivative transactions, turnaround expenses to the extent they are included in EBITDA, loss on extinguishment of debt, asset impairment charges, and board-directed actions.

"Adjusted EBITDA Threshold" means actual maintenance and sustaining capital expenditures plus reserves for turnaround expenses plus interest on debt for the given Performance Period, and board-directed actions. ***[REDACTED]***

"Chief Executive" means the President and Executive Chairman of the Company's general partner.

"Eligible Compensation" means (i) for eligible exempt employees, such employee's base salary at the time the Bonus or Spot Bonus is determined (prorated for time in an eligible position), and (ii) for eligible non-exempt and non-union hourly employees, such employees' eligible wages for the applicable year as determined by the Company to be required by law.

"Environmental Events" ("EE") means the total number of reportable quantities and water deviations.

- Reportable quantities are releases of substances during a 24-hour period that exceed a federal, state or local reporting threshold.
  - Reportable quantity is an event or contemporaneous combination of events during at 24-hour period that results in a release that exceeds a reportable quantity or quantities of a EPCRA/CERCLA compound as defined in the EPA List of Lists <u>or</u> a release that exceeds any other federal, state or local reporting threshold. Federally permitted releases and continuous releases defined in 40 CFR §302.6 and §302.8 are not considered reportable quantities under this measure.
  - A reportable quantity is counted by event or contemporaneous combination of events, not by the number of individual reports that are filed or number of compounds which exceed their reportable quantity. Events are considered contemporaneous if they occur within 24-hours or when a common cause results in one or more reportable quantities during contiguous or overlapping 24-hour periods.
- Water deviations are exceedances of a NPDES-based permit limit, wastewater bypasses and sheens to water of the United States.
  - The number of deviations is based on the number of individual permit limits exceeded irrespective of the number of causal events attributed to the deviation. However, a continuance of an ongoing permit limit deviation would not be double-counted if it were contemporaneous with a prior deviation and/or event.
  - Oil sheens and reportable quantities to water are only counted once as a water deviation environmental event.

A single event that results in multiple reportable quantities and/or when a water deviation is also a regulatory reportable quantity is not "double-counted" and will only be considered one Environmental Event.

"Executive Officer" of the Company means an "executive officer" as that term is defined in Rule 3b-7 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") or an "officer" of the Company for purposes of Section 16 of the Exchange Act.

"Equipment Utilization" means adjusted equivalent tons of urea ammonium nitrate production divided by the planned equivalent tons of production for the Performance Period, as adjusted at the discretion of the Compensation Committee for events or downtime caused by third parties. Planned production is reflected in the Company's annual volumetric plan. Monthly targets may be adjusted on a month by month basis to optimize production for which there is an economic incentive to do so during the given period. In such cases, the annual volumetric plan will be adjusted for the purposes of Bonus calculations with the new targets in place of the original targets.

“Operating Expense” means measurement of actual controllable and fixed operating costs divided by budgeted amounts. For purposes of calculating the Bonus, budgeted amounts are subject to revision by the Board in its discretion based on changes in business conditions or configuration of the business (e.g., items such as acquisitions or divestitures, unusual or non-recurring charges and changes in staffing relating to changed strategy approved by the Board will be considered as items for potential adjustment).

“Process Safety Incident Rate” (“PSIR”) means a standardized measure of process safety performance for the number of process safety tier 1 events per 100 full-time equivalent employees, as defined in the recommended practice for process safety performance indicators, ANSI/API RP 754.
A process safety tier 1 event is an unplanned or uncontrolled loss of primary containment of any material, including non-toxic and non-flammable materials, from a process that results in one or more consequences, including:

- an employee, contractor or subcontractor “days away from work” injury and/or fatality;
- a hospital admission and/or fatality or a third-party;
- an officially declared community evacuation or community shelter-in-place;
- a fire or explosion resulting in greater than or equal to $25,000 of direct cost to the company;
- an officially declared community evacuation or community shelter-in-place;
- a pressure relief device (PRD) discharge to atmosphere whether directly or via a downstream destructive device that results in one or more of four defined consequences and a PRD discharge quantity greater than defined threshold quantities in a one-hour period; or,
- a release of material greater than defined threshold quantities described in any one-hour period.

“Reliability” means Lost Profit Opportunity (“LPO”), defined as foregone gross margin that results from operational variance due to factors within the Company’s control, specifically including human and equipment performance, divided by the sum of actual gross margin plus LPO.

“Return on Capital Employed” (“ROCE”) means operating income before depreciation and amortization (excluding asset impairments, non-cash asset write-downs and inventory valuation gains or losses) divided by average Capital Employed during the Period (averages calculated using 5-quarter end balances for the measurement period).

“Capital Employed” means total assets, less current liabilities (adjusted for any asset or inventory valuations imputed on operating income.

“Total Recordable Injury Rate” (“TRIR”) means a standardized measure of safety performance for the number of work-related injuries per 100 full-time equivalent employees, as defined by OSHA.

Appendix G
Clawback and Recoupment Policy

This Clawback and Recoupment Policy applies to each Bonus and Spot Bonus (for purposes of this Plan, an "Award").

If the Compensation Committee in its sole and absolute discretion, determines that (i) there has been misconduct or a gross dereliction of duty resulting in either a violation of law or Company Policy, that, in either case, causes significant financial or reputational harm to the Company (or any of its affiliates), and that an employee committed the misconduct or gross dereliction of duty, or failed in his or her responsibility to manage or monitor the applicable conduct or risk; (ii) an employee has committed an immoral act which is reasonably likely to impair the reputation of the Company (or any of its affiliates); (iii) an employee committed, or was indicted for, a felony or any crime involving fraud or embezzlement or dishonesty or was convicted of, or entered a plea of *nolo contendere* to a misdemeanor (other than a traffic violation) punishable by imprisonment under federal, state or local law; (iv) an employee violated any securities or employment laws or regulations; (v) an employee materially breached a Company Policy or any non-compete and/or non-solicitation clause included in an agreement or offer letter with such employee's employer; (vi) an employee embezzled and/or misappropriated any property of the Company (or any of its affiliates) or committed any act involving fraud with respect to the Company (or any of its affiliates); or (vii) an employee engaged in conduct (including by omission) or an event or condition has occurred, which, in each case, would have given the Company or its subsidiaries the right to terminate the employee's employment for Cause (as defined herein), then, to the extent not prohibited by applicable law, such Compensation Committee, in its sole and absolute discretion, may cancel, declare forfeited, or rescind such Award, or may seek reimbursement from such employee (and such employee will be obligated to repay) all or any portion of any payments made to such employee in respect of such Award.

If the Compensation Committee determines, in its sole and absolute discretion, that calculations underlying the performance measures and targets, including but not limited to mistakes in the Company's financial statements, were incorrect, then such Compensation Committee may, in its sole and absolute discretion, seek to recover the amount of any payment made to employees that exceeded the amount that would have been paid based on the corrected calculations.

To the extent not prohibited by applicable law, if an employee is an officer, or, if applicable, has otherwise been designated by the Board of the Company as an Executive Officer, the Board may seek reimbursement of any payment made to such employee in respect of an Award in the event of a restatement of such Company's (or any of its subsidiaries') financial results (occurring due to material noncompliance with any financial reporting requirements under applicable securities laws) that reduced a previously granted payment made to such employee in respect of an Award. In that event, the Compensation Committee may, in its sole and absolute discretion, seek to recover the amount of any such payment made to the employee that exceeded the amount that would have been paid based on the restated financial results.

If the Company subsequently determines that it is required by law to apply a "clawback" or alternate recoupment provision to an Award, under the Dodd-Frank Wall Street Reform and Consumer Protection Act or otherwise, then such clawback or recoupment provision also shall apply to such Award, as if it had been included on the effective date of such Award.

To the extent not prohibited under applicable law, the Company (or any of its subsidiaries) (as applicable), in its sole and absolute discretion, will have the right to set off (or cause to be set off) any amounts otherwise due to employee from such Company or a subsidiary in satisfaction of any repayment obligation of such employee hereunder, provided that any such amounts are exempt from, or set off in a manner intended to comply with the requirements of Section 409A of the Internal Revenue Code of 1986, as amended.

For the avoidance of doubt, the Company's and its subsidiaries' rights under this Plan will apply to employees, without regard to whether any such employee is currently providing, or previously provided, services to the Company or its subsidiary as an employee.

“Cause” for purposes of any Award means such employee’s (i) refusal or neglect to perform substantially his or her employment-related duties or services, (ii) personal dishonesty, incompetence, willful misconduct or breach of fiduciary duty, (iii) indictment for, conviction of or entering a plea of guilty or nolo contendere to a crime constituting a felony or his or her willful violation of any applicable law (other than a traffic violation or other offense or violation outside of the course of employment or services to the Company or its affiliates which in no way adversely affects the Company and its affiliates or their reputation or the ability of the employee to perform his or her employment-related duties or services or to represent the Company or any affiliate of the Company that employs such employee or to which the employee performs services), (iv) failure to reasonably cooperate, following a request to do so by the Company, in any internal or governmental investigation of the Company or any of its affiliates or (v) material breach of any written covenant or agreement with the Company or any of its affiliates not to disclose any information pertaining to the Company or such affiliate or not to compete or interfere with the Company or such affiliate; provided that, in the case of any employee who, as of the date of determination, is party to an effective services, severance or employment agreement with the Company or any affiliate, “Cause” will have the meaning, if any, specified in such agreement.

Certain identified information in this Agreement denoted with ***[REDACTED]*** has been excluded from this exhibit because it is not material and would be competitively harmful if publicly disclosed.

CVR Refining, LP 2022
Performance-Based Bonus Plan

Philosophy / Background
CVR Refining, LP (the "Company") is committed to wages and benefits that are competitive with a market-based, pay-for-performance compensation philosophy, providing such base pay, bonus and long-term incentive awards in line with those of the refining industry. This Performance-Based Bonus Plan (the "Plan") is intended to reward high performance employees, and to retain these employees in critical roles, through the issuance of bonus awards (each, a "Bonus").

Administration
The Plan is maintained and administered by, or under the direction of, the Compensation Committee (the "Compensation Committee") of the board of directors (the "Board") of CVR Energy, Inc. with respect to, and references to "employee" herein relate only to, eligible employees or officers of the Company and its subsidiaries, excluding any employees of (or individuals solely subject to the bonus plans of) CVR Energy, Inc. ("CVI"), CVR Partners, LP ("UAN") and, with respect to UAN, its general partner and subsidiaries.

The Compensation Committee shall annually approve all salaries, targets and bonus metrics for employees in Grade E14 and above, and shall annually approve a total bonus pool for employees in Grade E13 and below. The Compensation Committee delegates to the Chief Executive the authority to approve payouts from such total bonus pool to employees in Grade E13 and below, in his sole discretion. The Chief Executive shall also be responsible for assigning salaries, bonus targets, and Grade levels to employees in Grade 13 and below.

In the event of a claim or dispute brought forth by any employee with a Grade level of E13 or below, the decision of the Chief Executive as to the facts in the case and the meaning and intent of any provision of the Plan, or its application, shall be final, binding, and conclusive. In the event of a claim or dispute brought forth by any employee with a Grade level of E14 or above, the decision of the Compensation Committee as to the facts in the case and the meaning and intent of any provision of the Plan, or its application, shall be final, binding, and conclusive.

The Plan described herein does not create a contractual obligation on the part of the Company. The Company expressly reserves the right to modify, discontinue, or otherwise change the Plan outlined in this document at the sole and absolute discretion of the Company without advance notice.

Introduction
The purpose of the Plan and any Bonus to be paid hereunder is to enhance the Company's ability to attract, motivate, reward and retain employees, and to strengthen their commitment to the success of the Company.

Eligibility and Administration
Bonuses are made based on the applicable calendar year during which the employees performed the services and are generally paid (to the extent payable) after the financials have been audited and within 90 days of the end of the calendar year (the "Performance Period" or "Period").

Generally, only exempt, non-exempt and non-union hourly employees are eligible to receive a Bonus, provided that, to receive a Bonus, an employee must: (i) be actively employed with the Company for at least 180 days during the calendar year; (ii) consistently perform at or above expectations for their role; (iii) be actively employed on the date of payout and not on a performance improvement plan or in corrective or disciplinary action status as a result of poor performance during the Performance Period. Employees hired prior to October 1 during the Performance Period will be eligible to receive a Bonus provided the above requirements (ii) and (iii) are met.

Subject to annual review, Bonuses are computed in accordance with each eligible employee's Grade (as shown in Appendix A), prorated for time in an eligible position, as well as a performance multiplier of zero to 150 percent, based on performance against the achievement of the allocated Company and individual performance measures described herein. Appendices A-E present the overall compensation structure (Appendix A), example calculations (Appendices B, C), eligibility (Appendix D) and bonus payout measures (Appendix E). The Individual Performance Multiplier component of a Bonus, if any, is entirely discretionary.

In addition, if the Adjusted EBITDA Threshold established for the Company for a given Performance Period is not reached, no Bonus will be paid for the Period, subject to Compensation Committee discretion. The Compensation Committee may, in its sole and absolute discretion, waive the Adjusted EBITDA Threshold requirement, increase, decrease, or otherwise adjust performance measures, targets, and payout ranges used hereunder, as a result of extraordinary or non-recurring events, changes in applicable accounting rules or principles, changes in the Company's methods of accounting, changes in applicable law, changes due to consolidations, growth capital spend programs, acquisitions, or reorganizations affecting the Company and its subsidiaries and affiliates, or other similar changes in the Company's business.

Company Performance: Environmental Health & Safety (EH&S) Measures – 25%
EH&S measures are as follows (see Appendix F for definitions):

- Personal Safety – Total Recordable Injury Rate (TRIR);
- Process Safety – Process Safety Incident Rate (PSIR); and
- Environmental Events (EE).

Company Performance: Financial Measures – 75%
Financial measures are objectives related to the following (see Appendix F for definitions):

- Reliability;
- Equipment Utilization;
- Operating Expense; and
- Return on Capital Employed.

Spot Bonus

Introduction
Employees making an extraordinary contribution to the furtherance of Company financial performance or advances in Company culture may be nominated by their manager or executive sponsor for a Bonus on a spot basis (a "Spot Bonus"), subject to approval by the Chief Executive. Spot Bonuses will be limited to employees in salary grades E13 and below and a maximum value of five thousand dollars ($5,000).

Terms and Conditions of Spot Bonus
Except as specifically set forth herein, the foregoing provisions of the Plan will likewise apply to a Spot Bonus. For the avoidance of doubt, these provisions relate to, among others, forfeiture and/or recoupment, amendment or termination, tax withholding, data protection and consent and governing law.

General Provisions

See Appendix F for definitions relating to the Plan.

Participation in the Plan is subject to (i) each individual employee's compliance with the Company's mission and values, its code of ethics and its policies and procedures, including, without limitation, the Corporate Policies and Procedures and employee handbook (collectively, "Company Policies"), and (ii) the Clawback and Recoupment Policy attached as Appendix G.

Each employee that is eligible and receives a Bonus or Spot Bonus will be liable for any and all federal, state, provincial, local or foreign taxes, pension plan contributions, employment insurance premiums, social insurance contributions, amounts payable to a governmental and/or regulatory body in the employee's country and other levies of any kind required by applicable laws to be deducted or withheld with respect to any such award (collectively, the "Withholding Taxes"). The Company will have the right to deduct and withhold all required Withholding Taxes from any payment or other consideration deliverable to an employee pursuant to any such payment. All awards under the Plan are intended to be exempt from Section 409A of the Internal Revenue Code of 1986, as amended, and shall be construed and interpreted in accordance with such intent.

Participation in the Plan does not confer upon any employee any right to continue in the employ of the Company or its subsidiaries, nor interfere in any way with the right of the Company and its subsidiaries to terminate any employee's employment at any time. The Company and its subsidiaries are under no obligation to continue the Plan in future years.

The Compensation Committee may at any time, or from time to time, in its sole and absolute discretion, (a) amend, alter or modify the provisions of this Plan, (b) terminate this Plan, or (c) terminate the participation of an employee or group of employees in this Plan; provided, however, that in the event of the termination of the Plan or a termination of participation, the Compensation Committee, in its sole and absolute discretion, may determine that a prorated award is payable to employees who were participants in this Plan under such terms and conditions as established by the Compensation Committee.

Notwithstanding anything herein to the contrary, whether or not any payment or award is authorized, earned or paid under the Plan will be determined by the Compensation Committee in its sole and absolute discretion, and no such payment or award shall be earned, nor shall any right to any such payment or award exist or accrue, unless, among other factors, such payment or award has been authorized by the Compensation Committee in its sole and absolute discretion, and actually paid to the employee. In addition, whether or not any payment or award is authorized, earned or paid pursuant to the Plan is without regard to whether any of the individual performance metrics, financial performance targets and/or goals, or any other benchmarks, targets, personal goals or criteria set forth in the Plan are met, not met, exceeded or not exceeded.

No employee, beneficiary or other person shall have any right, title or interest in any amount awarded under the Plan prior to the payment of such award to him or her. An employee's rights to a payment under the Plan are no greater than those of unsecured general creditors of the Company or its subsidiaries.

By participating in the Plan, each employee consents to the holding and processing of personal information provided by such employee to the employer, any affiliate of the employer, trustee or third party service provider, for all purposes relating to the operation of the Plan. Consents include, but are not limited to: (i) administering and maintaining employee records; (ii) providing information to the employer, its affiliates, trustees of any employee benefit trust, registrars, brokers or third party administrators of the Plan; (iii) providing information to future purchasers or merger partners of the employer or any of its affiliates, or the business in which the employee works; and (iv) to the extent not prohibited by applicable law, transferring information about the employee to any country or territory that may not provide the same protection for the information as the employee's home country.

The Plan is governed by the laws of the State of New York and as such will be construed under and in accordance with the laws of the State of New York without regard to conflicts of law.

Appendix A
Compensation Structure: Base Pay & Incentive Plans

[TABLE REDACTED]

Individual Performance Measures
Supervisor's assessment of employee's performance will be based on the following categories:
- Interpersonal effectiveness
- Business conduct
- Professional and technical development
- Leadership
- Achievement of goals
- Results orientation

The assessment is discretionary and based on a wide range of considerations which often change over the course of the year.

Appendix B
Bonus Payout and Company Performance Calculations

Bonus Payout Calculation:

Eligible Compensation	X	Target Bonus % based on Salary Grade	X	[	Company Performance Allocation* (0-100%)	X	Company Performance Multiplier (0-150%)	+	Individual Performance Allocation* (0-100%)	X	Individual Performance Multiplier (0-150%)	]

*Company Performance Allocation + Individual Performance Allocation = 100%
Allocations are based on employee salary grade

****Company Performance Multiplier:**

25%	X	EH&S Achievement (0-150%)	+	75%	X	[	25% X	Reliability (0-150%)	+	25% X	Equipment Utilization (0-150%)	+	25% X	Operating Expense (0-150%)	+	25% X	ROCE (0-150%)	]

Appendix C
Bonus Payout Examples

Example Bonus Calculation 1:														
Salary Grade	E12													
Eligible Compensation	$196,000	**Eligible Compensation**		**Bonus Target %**			**Co. Perf. Alloc.**		**Co. Perf. Multiplier**		**Ind. Perf. Alloc.**		**Ind. Perf. Multiplier**	
Performance Rating	Exceeds	$196,000	X	40%	X	(	50%	X	110%	+	50%	X	125%	)
Bonus Target %	40%													
Company Performance Allocation	50%		=	$92,120										
Company Performance Multiplier (0-150%)	110%													
Individual Performance Allocation	50%													
Individual Performance Multiplier (0-150%)	125%													

Example Bonus Calculation 2:										
Salary Grade	E06									
Eligible Compensation	$90,000	**Eligible Compensation**		**Bonus Target %**			**Ind. Perf. Alloc.**		**Ind. Perf. Multiplier**	
Performance Rating	Far Exceeds	$90,000	X	14%	X	(	100%	X	150%	)
Bonus Target %	14%									
Company Performance Allocation	N/A		=	$18,900						
Company Performance Multiplier (0-150%)	N/A									
Individual Performance Allocation	100%									
Individual Performance Multiplier (0-150%)	150%									

Example Bonus Calculation 3:										
Hourly Non-Represented	Hrly Non-Rep									
Eligible Compensation	$70,000	**Eligible Compensation**		**Bonus Target %**			**Co. Perf. Alloc.**		**Co. Perf. Multiplier**	
Performance Rating	None	$70,000		6%	X	(	100%	X	110%	)
Bonus Target %	6%									
Company Performance Allocation	100%		=	$4,620						
Company Performance Multiplier (0-150%)	110%									
Individual Performance Allocation	N/A									
Individual Performance Multiplier (0-150%)	N/A									

Appendix D
CVR Refining, LP

Eligibility
Non-union direct employees of Company, its general partner and their respective subsidiaries, including Commercial Executives, Pipeline, Trucking, Marketing, Company Controller, Crude, Planning, Wholesale, Wynnewood and Coffeyville refineries and Capital Projects, and any employee of any affiliated entity deemed by the Chief Executive in their sole discretion to be solely dedicated to the Company or its subsidiaries, but excluding anyone not an eligible employee as described in the Plan.

Appendix E
CVR Refining, LP
Bonus Payout Measures

Environmental Health & Safety (EH&S) Measures (25%)
Three measures evenly weighted (33-1/3% each): Total Recordable Incident Rate (TRIR), Process Safety Tier I Incident Rate (PSIR), and Environmental Events (EE):

Percentage Change(over the prior year)	Bonus Achievement
Increase in Incident Rate or Incidents	Zero
0%	50% of Target Percentage (Threshold)
Decrease > 0% and < 3%	Linear Interpolation between Threshold and Target
Decrease of 3%	Target Percentage
Decrease > 3% and < 10%	Linear Interpolation between Target and Maximum
Decrease of 10% or more, or if TRIR is maintained at or below 1.0, PSIR at or below 0.2 and EE at or below 20	150% of Target (Maximum)

Financial Measures (75%)
Four measures evenly weighted (25% each):

Reliability	Bonus Achievement
Greater than 8.0%	Zero
8.00%	50% of Target Percentage (Threshold)
6.01% to 7.99%	Linear Interpolation between Threshold and Target
6.00%	Target Percentage
5.0% to 5.99%	Linear Interpolation between Target and Maximum
Less than 5.0%	150% of Target (Maximum)

Equipment Utilization	Bonus Achievement
Less than 95%	Zero
95%	50% of Target Percentage (Threshold)
95.01% to 99.99%	Linear Interpolation between Threshold and Target
100%	Target Percentage
100.01% to 104.99%	Linear Interpolation between Target and Maximum
Greater than 105%	150% of Target (Maximum)

Operating Expense	Bonus Achievement
Greater than 103.0%	Zero
103%	50% of Target Percentage (Threshold)
100.1% to 102.99%	Linear Interpolation between Threshold and Target
100%	Target Percentage
95.0% to 99.99%	Linear Interpolation between Target and Maximum
Less than 95%	150% of Target (Maximum)

CVRR ROCE (Ranking vs. Peer Group*)	Bonus Achievement
First (highest)	150% of Target (Maximum)
Second	125% of Target Percentage
Third	112.5% of Target Percentage
Fourth	Target Percentage (100%)
Fifth	75% of Target Percentage
Six	50% of Target Percentage (Minimum)
Seventh	Zero

Performance measures subject to peer group ranking will be based on LTM data as of September 30 of the Performance Period.

*The Refining Industry peer group will include Valero, Marathon, PBF Energy, Delek, Holly Frontier and Par Pacific.

Appendix F
Definitions

“Adjusted EBITDA” for the Company means earnings before interest, taxes, depreciation and amortization, and adjusted for inventory valuation impacts,, unrealized gains and losses on derivative transactions, turnaround expenses to the extent they are included in EBITDA, loss on extinguishment of debt, asset impairment charges, and board-directed actions.

“Adjusted EBITDA Threshold” means actual maintenance and sustaining capital expenditures plus reserves for turnaround expenses plus interest on debt for the given Performance Period, and board-directed actions. ***[REDACTED]***

“Chief Executive” means the President and Chief Executive Officer of the Company.

“Eligible Compensation” means (i) for eligible exempt employees, such employee’s base salary at the time the Bonus or Spot Bonus is determined (prorated for time in an eligible position), and (ii) for eligible non-exempt and non-union hourly employees, such employees’ eligible wages for the applicable year as determined by the Company to be required by law.

“Environmental Events” (“EE”) means the total number of reportable quantities and water deviations.

- Reportable quantities are releases of substances during a 24-hour period that exceed a federal, state or local reporting threshold.
    - Reportable quantity is an event or contemporaneous combination of events during at 24-hour period that results in a release that exceeds a reportable quantity or quantities of a EPCRA/CERCLA compound as defined in the EPA List of Lists or a release that exceeds any other federal, state or local reporting threshold. Federally permitted releases and continuous releases defined in 40 CFR §302.6 and §302.8 are not considered reportable quantities under this measure.
    - A reportable quantity is counted by event or contemporaneous combination of events, not by the number of individual reports that are filed or number of compounds which exceed their reportable quantity. Events are considered contemporaneous if they occur within 24-hours or when a common cause results in one or more reportable quantities during contiguous or overlapping 24-hour periods.
- Water deviations are exceedances of a NPDES-based permit limit, wastewater bypasses and sheens to water of the United States.
    - The number of deviations is based on the number of individual permit limits exceeded irrespective of the number of causal events attributed to the deviation. However, a continuance of an ongoing permit limit deviation would not be double-counted if it were contemporaneous with a prior deviation and/or event.
    - Oil sheens and reportable quantities to water are only counted once as a water deviation environmental event.

A single event that results in multiple reportable quantities and/or when a water deviation is also a regulatory reportable quantity is not “double-counted” and will only be considered one Environmental Event.

“Executive Officer” of the Company means an “executive officer” as that term is defined in Rule 3b-7 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”) or an “officer” of the Company for purposes of Section 16 of the Exchange Act.

“Equipment Utilization” means actual throughput for the Performance Period divided by the planned throughput for the Performance Period, as adjusted at the discretion of the Compensation Committee for events or downtime caused by third parties. Planned throughput is reflected in the Company’s annual volumetric plan. Monthly targets may be adjusted on a month by month basis to optimize production for which there is an economic incentive to do so during the given period. In such cases, the annual volumetric plan will be adjusted for the purposes of Bonus calculations with the new targets in place of the original targets.

“Operating Expense” means measurement of actual controllable and fixed operating costs divided by budgeted amounts. For purposes of calculating the Bonus, budgeted amounts are subject to revision by the Board in its discretion based on changes in business conditions or configuration of the business (e.g., items such as acquisitions or divestitures, unusual or non-recurring charges and changes in staffing relating to changed strategy approved by the Board will be considered as items for potential adjustment).

“Process Safety Incident Rate” (“PSIR”) means a standardized measure of process safety performance for the number of process safety tier 1 events per 100 full-time equivalent employees, as defined in the recommended practice for process safety performance indicators, ANSI/API RP 754.
A process safety tier 1 event is an unplanned or uncontrolled loss of primary containment of any material, including non-toxic and non-flammable materials, from a process that results in one or more consequences, including:
- an employee, contractor or subcontractor “days away from work” injury and/or fatality;
- a hospital admission and/or fatality or a third-party;
- an officially declared community evacuation or community shelter-in-place;
- a fire or explosion resulting in greater than or equal to $25,000 of direct cost to the company;
- an officially declared community evacuation or community shelter-in-place;
- a pressure relief device (PRD) discharge to atmosphere whether directly or via a downstream destructive device that results in one or more of four defined consequences and a PRD discharge quantity greater than defined threshold quantities in a one-hour period; or,
- a release of material greater than defined threshold quantities described in any one-hour period.

“Reliability” means Lost Profit Opportunity (“LPO”), defined as foregone refining margin that results from operational variance due to factors within the Company’s control, specifically including human and equipment performance, divided by the sum of actual refining margin plus LPO.

“Return on Capital Employed” (“ROCE”) means operating income before depreciation and amortization (excluding asset impairments, non-cash asset write-downs and inventory valuation gains or losses) divided by average Capital Employed during the Period (averages calculated using 5-quarter end balances for the measurement period).

“Capital Employed” means the total assets, less current liabilities (adjusted for any asset or inventory valuations imputed on operating income).

“Total Recordable Injury Rate” (“TRIR”) means a standardized measure of safety performance for the number of work-related injuries per 100 full-time equivalent employees, as defined by OSHA.

“Throughput” means total crude oil and other feedstocks charged to the refinery including isobutane, normal butane, natural gasoline, gas oil, biodiesel and ethanol used for blending.

Appendix G
Clawback and Recoupment Policy

This Clawback and Recoupment Policy applies to each Bonus and Spot Bonus (for purposes of this Plan, an "Award").

If the Compensation Committee in its sole and absolute discretion, determines that (i) there has been misconduct or a gross dereliction of duty resulting in either a violation of law or Company Policy, that, in either case, causes significant financial or reputational harm to the Company (or any of its affiliates), and that an employee committed the misconduct or gross dereliction of duty, or failed in his or her responsibility to manage or monitor the applicable conduct or risk; (ii) an employee has committed an immoral act which is reasonably likely to impair the reputation of the Company (or any of its affiliates); (iii) an employee committed, or was indicted for, a felony or any crime involving fraud or embezzlement or dishonesty or was convicted of, or entered a plea of *nolo contendere* to a misdemeanor (other than a traffic violation) punishable by imprisonment under federal, state or local law; (iv) an employee violated any securities or employment laws or regulations; (v) an employee materially breached a Company Policy or any non-compete and/or non-solicitation clause included in an agreement or offer letter with such employee's employer; (vi) an employee embezzled and/or misappropriated any property of the Company (or any of its affiliates) or committed any act involving fraud with respect to the Company (or any of its affiliates); or (vii) an employee engaged in conduct (including by omission) or an event or condition has occurred, which, in each case, would have given the Company or its subsidiaries the right to terminate the employee's employment for Cause (as defined herein), then, to the extent not prohibited by applicable law, such Compensation Committee, in its sole and absolute discretion, may cancel, declare forfeited, or rescind such Award, or may seek reimbursement from such employee (and such employee will be obligated to repay) all or any portion of any payments made to such employee in respect of such Award.

If the Compensation Committee determines, in its sole and absolute discretion, that calculations underlying the performance measures and targets, including but not limited to mistakes in the Company's financial statements, were incorrect, then such Compensation Committee may, in its sole and absolute discretion, seek to recover the amount of any payment made to employees that exceeded the amount that would have been paid based on the corrected calculations.

To the extent not prohibited by applicable law, if an employee is an officer, or, if applicable, has otherwise been designated by the Board of the Company as an Executive Officer, the Board may seek reimbursement of any payment made to such employee in respect of an Award in the event of a restatement of such Company's (or any of its subsidiaries') financial results (occurring due to material noncompliance with any financial reporting requirements under applicable securities laws) that reduced a previously granted payment made to such employee in respect of an Award. In that event, the Compensation Committee may, in its sole and absolute discretion, seek to recover the amount of any such payment made to the employee that exceeded the amount that would have been paid based on the restated financial results.

If the Company subsequently determines that it is required by law to apply a "clawback" or alternate recoupment provision to an Award, under the Dodd-Frank Wall Street Reform and Consumer Protection Act or otherwise, then such clawback or recoupment provision also shall apply to such Award, as if it had been included on the effective date of such Award.

To the extent not prohibited under applicable law, the Company (or any of its subsidiaries) (as applicable), in its sole and absolute discretion, will have the right to set off (or cause to be set off) any amounts otherwise due to employee from such Company or a subsidiary in satisfaction of any repayment obligation of such employee hereunder, provided that any such amounts are exempt from, or set off in a manner intended to comply with the requirements of Section 409A of the Internal Revenue Code of 1986, as amended.

For the avoidance of doubt, the Company's and its subsidiaries' rights under this Plan will apply to employees, without regard to whether any such employee is currently providing, or previously provided, services to the Company or its subsidiary as an employee.

“Cause” for purposes of any Award means such employee’s (i) refusal or neglect to perform substantially his or her employment-related duties or services, (ii) personal dishonesty, incompetence, willful misconduct or breach of fiduciary duty, (iii) indictment for, conviction of or entering a plea of guilty or nolo contendere to a crime constituting a felony or his or her willful violation of any applicable law (other than a traffic violation or other offense or violation outside of the course of employment or services to the Company or its affiliates which in no way adversely affects the Company and its affiliates or their reputation or the ability of the employee to perform his or her employment-related duties or services or to represent the Company or any affiliate of the Company that employs such employee or to which the employee performs services), (iv) failure to reasonably cooperate, following a request to do so by the Company, in any internal or governmental investigation of the Company or any of its affiliates or (v) material breach of any written covenant or agreement with the Company or any of its affiliates not to disclose any information pertaining to the Company or such affiliate or not to compete or interfere with the Company or such affiliate; provided that, in the case of any employee who, as of the date of determination, is party to an effective services, severance or employment agreement with the Company or any affiliate, “Cause” will have the meaning, if any, specified in such agreement.

Exhibit 10.11

COUNTERPART AGREEMENT

CVR Renewables, LLC
2277 Plaza Drive, Suite 500
Sugar Land, Texas 77479

April 12, 2022

Ladies and Gentlemen:

Reference is made to the Amended and Restated ABL Pledge and Security Agreement (as amended, amended and restated, supplemented or otherwise modified from time to time, the "Security Agreement"; capitalized terms used but not otherwise defined herein shall have the meanings assigned to such terms in the Security Agreement), dated as of December 20, 2012, among COFFEYVILLE RESOURCES, LLC, CVR REFINING, LP, the other Grantors named therein, and WELLS FARGO BANK, NATIONAL ASSOCIATION, as the Collateral Trustee.

This Counterpart Agreement supplements the Security Agreement and is delivered by the undersigned, CVR Renewables, LLC, a Delaware limited liability company (the "Additional Grantor"), pursuant to Section 5.3 of the Security Agreement. The Additional Grantor hereby agrees to be bound as a Grantor party to the Security Agreement by all of the terms, covenants and conditions set forth in the Security Agreement to the same extent that it would have been bound if it had been a signatory to the Security Agreement on the date of the Security Agreement. The Additional Grantor also hereby agrees to be bound as a party by all of the terms, covenants and conditions applicable to it set forth in the Credit Agreement to the same extent that it would have been bound if it had been a signatory to the Credit Agreement on the execution date of the Credit Agreement. Without limiting the generality of the foregoing, the Additional Grantor hereby grants and pledges to the Collateral Agent, as collateral security for the full, prompt and complete payment and performance when due (whether at stated maturity, by acceleration or otherwise) of the Secured Obligations, a security interest in and continuing lien on, all of its right, title and interest in, to and under the Collateral and expressly assumes all obligations and liabilities of a Grantor thereunder. The Additional Grantor hereby makes each of the representations and warranties and agrees to each of the covenants applicable to the Grantor contained in the Security Agreement and the Credit Agreement.

Annexed hereto are supplements to each of the schedules to the Security Agreement with respect to the Additional Grantor. Such supplements shall be deemed to be part of the Security Agreement.

This Counterpart Agreement and any amendments, waivers, consents or supplements hereto may be executed in any number of counterparts and by different parties hereto in separate counterparts, each of which when so executed and delivered shall be deemed to be an original, but all such counterparts together shall constitute one and the same agreement.

THIS COUNTERPART AGREEMENT SHALL BE GOVERNED BY, AND SHALL BE CONSTRUED AND ENFORCED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK.

IN WITNESS WHEREOF, the Additional Grantor has caused this Counterpart Agreement to be executed and delivered by its duly authorized officer as of the date first above written.

CVR RENEWABLES, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary

AGREED TO AND ACCEPTED:

WELLS FARGO BANK, NATIONAL ASSOCIATION,
as Collateral Agent

By: /s/ Ryan C. Tozier
Name: Ryan C. Tozier
Title: Vice President

SCHEDULE 4.1
TO ABL PLEDGE AND SECURITY AGREEMENT

GENERAL INFORMATION

Omitted pursuant to Item 601(a)(5) of Regulation S-K
and will be provided to the SEC upon request.

INVESTMENT RELATED PROPERTY

Omitted pursuant to Item 601(a)(5) of Regulation S-K
and will be provided to the SEC upon request.

DESCRIPTION OF LETTERS OF CREDIT

Omitted pursuant to Item 601(a)(5) of Regulation S-K
and will be provided to the SEC upon request.

SCHEDULE 4.7
TO PLEDGE AND SECURITY AGREEMENT

INTELLECTUAL PROPERTY

Omitted pursuant to Item 601(a)(5) of Regulation S-K and will be provided to the SEC upon request.

COMMERCIAL TORT CLAIMS

Omitted pursuant to Item 601(a)(5) of Regulation S-K
and will be provided to the SEC upon request.

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Execution Version

JOINDER AGREEMENT

THIS JOINDER IN CREDIT AGREEMENT AND NOTES (this “Joinder”) is executed as of April 12, 2022, by CVR RENEWABLES, LLC, a Delaware limited liability company (the “Joining Party”) and delivered to Wells Fargo Bank, National Association, as Administrative Agent and as Collateral Agent, for the benefit of the Secured Parties (as defined below). Except as otherwise defined herein, terms used herein and defined in the Credit Agreement shall be used herein as therein defined.

WITNESSETH:

WHEREAS, CVR Refining, LP, CVR Services, LLC, Coffeyville Resources Refining & Marketing, LLC, CVR Refining, LLC, Coffeyville Resources Pipeline, LLC, Coffeyville Resources Crude Transportation, LLC, Coffeyville Resources Terminal, LLC, Wynnewood Energy Company, LLC, Wynnewood Refining Company, LLC, certain other Subsidiaries of the MLP from time to time party thereto, the various lenders from time to time party thereto (the “Lenders”), and Wells Fargo Bank, National Association, as Administrative Agent and as Collateral Agent, have entered into that certain Amended and Restated ABL Credit Agreement, dated as of December 20, 2012, as amended by Amendment No. 1 to Amended and Restated ABL Credit Agreement, dated November 14, 2017, and Amendment No. 2 to Amended and Restated ABL Credit Agreement, dated December 23, 2019 (as the same now exists and as may be further amended, modified, supplemented, extended, renewed, restated or replaced, the “Credit Agreement”), providing for the making of Loans to, and the issuance of Letters of Credit for the account of, the Borrowers as contemplated therein;

WHEREAS, the Joining Party is a direct or indirect Domestic Subsidiary of a Credit Party and desires, or is required pursuant to the provisions of the Credit Agreement, to become a Borrower under the Credit Agreement; and

WHEREAS, the Joining Party will obtain benefits from the incurrence of Loans by the Borrowers and as a Borrower, and the issuance of, and participation in, Letters of Credit for the account of the Borrowers and as a Borrower, in each case pursuant to the Credit Agreement, and, accordingly, desires to execute this Joinder in order to (i) satisfy the requirements described in the preceding paragraph and (ii) induce the Lenders to make Loans to the Borrowers and issue, and/or participate in, Letters of Credit for the accounts of the Borrowers;

NOW, THEREFORE, in consideration of the foregoing and other benefits accruing to the Joining Party, the receipt and sufficiency of which are hereby acknowledged, the Joining Party hereby makes the following representations and warranties to the Secured Parties and hereby covenants and agrees with each Secured Party as follows:

1. By this Joinder, the Joining Party becomes a Borrower for all purposes under the Credit Agreement.

2. The Joining Party agrees that, upon its execution hereof, it will become a Borrower under the Credit Agreement, and will be bound by all terms, conditions and duties applicable to a Borrower under the Credit Agreement and the other Credit Documents (including each Note, whether or not such Joining Party actually signs a counterpart thereof). Without limitation of the foregoing, and in furtherance thereof, the Joining Party agrees, on a joint and several basis with the other Borrowers, to irrevocably and unconditionally pay in full all of the Obligations of the Borrowers in accordance with the terms of the Credit Agreement and the other Credit Documents.

3. The Joining Party hereby makes and undertakes, as the case may be, each covenant, representation and warranty made by each Borrower under the Credit Agreement and each other Credit Document, and agrees to be bound by all covenants, agreements and obligations of a Borrower pursuant to the Credit Agreement and all other Credit Documents to which it is or becomes a party.

4. This Joinder shall be binding upon the parties hereto and their respective successors and assigns and shall inure to the benefit of and be enforceable by each of the parties hereto and its successors and assigns, provided, however, that the Joining Party may not assign any of its rights, obligations or

interest hereunder or under any other Credit Document, except as otherwise permitted by the Credit Documents. THIS JOINDER SHALL BE CONSTRUED AND ENFORCED IN ACCORDANCE WITH AND GOVERNED BY THE LAW OF THE STATE OF NEW YORK. This Joinder may be executed in any number of counterparts, each of which shall be an original, but all of which shall constitute one instrument. Delivery of an executed signature page to this Joinder by facsimile transmission (or other electronic means, including .pdf) shall be as effective as delivery of a manually signed counterpart of this Joinder. In the event that any provision of this Joinder shall prove to be invalid or unenforceable, such provision shall be deemed to be severable from the other provisions of this Joinder which shall remain binding on all parties hereto.

5. From and after the execution and delivery hereof by the parties hereto, this Joinder shall constitute a "Credit Document" for all purposes of the Credit Agreement and the other Credit Documents.

6. Each of the representations and warranties set forth in the Credit Agreement and each other Credit Document and applicable to the undersigned is true and correct in all material respects, after giving effect to this Joinder on the date hereof, except to the extent that any such representation and warranty relates solely to any earlier date, in which case such representation and warranty is true and correct in all material respects as of such earlier date (it being understood that any representation or warranty that is qualified as to "materiality," "Material Adverse Effect" or similar language shall be true and correct in all respects on any such date).

7. The effective date of this Joinder is April 12, 2022.

8. On or before May 13, 2022 (or such later date agreed to by the Administrative Agent in its sole discretion), the Administrative Agent shall have received from White & Case LLP, special counsel to the Credit Parties, an opinion, in form and substance reasonably satisfactory to the Administrative Agent, addressed to the Administrative Agent, the Collateral Agent and each of the Lenders covering such matters incident to the transactions contemplated herein as the Administrative Agent may reasonably request.

* * *

IN WITNESS WHEREOF, the Joining Party has caused this Joinder to be duly executed as of the date first above written.

CVR RENEWABLES, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer, and Assistant Secretary

Accepted and Acknowledged by:

WELLS FARGO BANK, NATIONAL ASSOCIATION,
as Administrative Agent and as Collateral Agent

By: /s/ Ryan C. Tozier
Name: Ryan C. Tozier
Title: Vice President

Execution Version

AMENDMENT TO CORPORATE MASTER SERVICE AGREEMENT

This Amendment to Corporate Master Services Agreement (this "***Amendment***"), dated as of April 12, 2022, is by and among CVR Services, LLC, a Delaware limited liability company ("***Service Provider***"), each of the entities listed on Schedule A attached hereto (each a "***Service Recipient***" and collectively the "***Service Recipients***"), and each of the entities listed on Schedule B attached hereto (each a "***Joining Party***", and collectively, the "***Joining Parties***").

WHEREAS, Service Provider and the Service Recipients entered into that certain Corporate Master Service Agreement, dated as of February 19, 2020, but effective as of January 1, 2020 (as amended, restated, amended and restated, extended, supplemented or otherwise modified from time to time, the "***Corporate Master Service Agreement***"); and

WHEREAS, Service Provider and the Service Recipients wish to amend to the Corporate Master Service Agreement to add the Joining Parties as Service Recipients thereunder;

NOW, THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged and agreed, the Parties hereto hereby agree as follows:

1. DEFINITIONS. Service Provider, the Service Recipients and the Joining Parties are referred to herein collectively as the "***Parties***" and each, a "***Party.***" Each capitalized term used herein but not otherwise defined shall have the meaning set forth in the Corporate Master Service Agreement.

2. AGREEMENT TO BE BOUND. Each of the Joining Parties hereby agrees to be bound by all of the terms of the Corporate Master Service Agreement. Each of the Joining Parties hereby acknowledges receipt of a copy of the Corporate Master Service Agreement and agrees to become a party thereto and to be bound thereby as a Service Recipient thereunder, and hereby assumes all of the rights and obligations related thereto as set forth in the Corporate Master Service Agreement.

3. AMENDMENT. Pursuant to and in accordance with Section 16 (*Modification and Amendment*) of the Corporate Master Service Agreement, the Parties hereby amend and restate Section 16 (*Modification and Amendment*) of the Corporate Master Service Agreement in its entirety as follows:

> "**MODIFICATION AND AMENDMENT.** Service Provider may amend this Agreement to allow for the provision of Services to any Affiliate. Upon executing and delivering an additional counterpart signature to this Agreement, such Affiliate shall be deemed to be a "Service Recipient" for all purposes hereunder, and shall be entitled to all corresponding benefits and be responsible for all obligations of a Service Recipient as provided for herein. No action or consent by any Party, other than Service Provider, shall be required for an Affiliate to join this Agreement."

4. GOVERNING LAW AND VENUE. This Amendment shall be governed by and construed in accordance with the internal laws of the State of Texas, without regard to conflict of law principles (whether of the State of Texas or any other jurisdiction) that would cause the application of the laws of any jurisdiction other than the State of Texas. Each Party hereby submits to the exclusive jurisdiction of the state and federal courts in the State of Texas and to venue in Houston, Texas, and hereby waives any objection thereto.

5. COUNTERPARTS. This Amendment may be executed in one or more counterparts, any one of which may be by facsimile, and all of which taken together shall constitute one and the same instrument. The exchange of copies of this Amendment and of signature pages by electronic transmission, including by electronic mail in portable document format (".pdf"), or by any other electronic means intended to preserve the original graphic and pictorial appearance of a document, or by a combination of such means, shall constitute effective execution and delivery of this Agreement as to the Parties and may be used in lieu of an original Agreement for all purposes. Signatures of the Parties transmitted by facsimile or other electronic transmission shall be deemed to be original signatures for all purposes.

6. **NOTICES.** All notices, offers, acceptances, waivers and other communications under this Amendment shall be in writing and shall be deemed to have been given and received (i) upon receipt when delivered by hand, (ii) upon transmission, if sent by electronic mail transmission (in each case with receipt verified by electronic confirmation), or (iii) one business day after being sent by overnight courier or express delivery service; provided, that in each case the notice or other communication is sent to the address, electronic mail address set forth beneath the name of such Party below (or to such other address or electronic mail address as such Party shall have specified in a written notice given to the other Parties hereto):

(a) If to Service Provider:

CVR Services, LLC
2277 Plaza Drive, Suite 500
Sugar Land, Texas 77479
Attention: Chief Accounting Officer
Email: jconaway@CVREnergy.com
With a copy to the Office of the General Counsel at the above address
Email: LegalServices@CVREnergy.com

(b) If to any Service Recipient other than CVR Partners, LP or one of its subsidiaries:

Service Recipient
2277 Plaza Drive, Suite 500
Sugar Land, Texas 77479
Attention: EVP & Chief Financial Officer
Email: djneumann@CVREnergy.com
With a copy to the Office of the General Counsel at the above address
Email: LegalServices@CVREnergy.com

(c) If to any Service Recipient that is CVR Partners, LP or one of its subsidiaries:

Service Recipient
2277 Plaza Drive, Suite 500
Sugar Land, Texas 77479
Attention: President & Chief Executive Officer
Email: mpytosh@CVREnergy.com
With a copy to the Office of the General Counsel at the above address
Email: LegalServices@CVREnergy.com

(d) If to a Joining Party:

Joining Party
2277 Plaza Drive, Suite 500
Sugar Land, Texas 77479
Attention: EVP & Chief Financial Officer
Email: djneumann@CVREnergy.com
With a copy to the Office of the General Counsel at the above address
Email: LegalServices@CVREnergy.com

7. **MISCELLANEOUS.** The following Sections of the Corporate Master Service Agreement are incorporated herein by reference, *mutatis mutandis,* as if set forth fully herein: Section 7 (*Confidentiality*); Section 13 (*Assignment*); Section 14 (*Entire Agreement*); and Section 15 (*No Third Party Beneficiaries*).

IN WITNESS WHEREOF, the Parties have executed this Amendment as of the date first written above.

CVR SERVICES, LLC

By: /s/ Jeffrey D. Conaway
Name: Jeffrey D. Conaway
Title: Vice President - Chief Accounting Officer and Corporate Controller
Date: April 12, 2022

WYNNEWOOD ENERGY COMPANY, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

WYNNEWOOD REFINING COMPANY, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

COFFEYVILLE RESOURCES REFINING & MARKETING, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

COFFEYVILLE RESOURCES CRUDE TRANSPORTATION, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

COFFEYVILLE RESOURCES TERMINAL, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

COFFEYVILLE RESOURCES PIPELINE, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

CVR REFINING, LP

By: CVR REFINING GP, LLC, its general partner

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

CVR REFINING GP, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

CVR REFINING, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

COFFEYVILLE RESOURCES NITROGEN FERTILIZERS, LLC

By: /s/ Mark A. Pytosh
Name: Mark A. Pytosh
Title: President & Chief Executive Officer
Date: April 12, 2022

EAST DUBUQUE NITROGEN FERTILIZERS, LLC

By: /s/ Mark A. Pytosh
Name: Mark A. Pytosh
Title: President & Chief Executive Officer
Date: April 12, 2022

CVR NITROGEN HOLDINGS, LLC

By: /s/ Mark A. Pytosh
Name: Mark A. Pytosh
Title: President & Chief Executive Officer
Date: April 12, 2022

CVR NITROGEN GP, LLC

By: /s/ Mark A. Pytosh
Name: Mark A. Pytosh
Title: President & Chief Executive Officer
Date: April 12, 2022

CVR NITROGEN, LP

By: CVR NITROGEN GP, LLC, its general partner

By: /s/ Mark A. Pytosh
Name: Mark A. Pytosh
Title: President & Chief Executive Officer
Date: April 12, 2022

CVR NITROGEN FINANCE CORPORATION

By: /s/ Mark A. Pytosh
Name: Mark A. Pytosh
Title: President & Chief Executive Officer
Date: April 12, 2022

CVR PARTNERS, LP

By: CVR GP, LLC, its general partner

By: /s/ Mark A. Pytosh
Name: Mark A. Pytosh
Title: President & Chief Executive Officer
Date: April 12, 2022

CVR GP, LLC

By: /s/ Mark A. Pytosh
Name: Mark A. Pytosh
Title: President & Chief Executive Officer
Date: April 12, 2022

CVR ENERGY, INC.

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

WYNNEWOOD INSURANCE CORPORATION

By: /s/ Mark A. Pytosh
Name: Mark A. Pytosh
Title: EVP – Corporate Services & Treasurer
Date: April 12, 2022

CVR AVIATION, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

CVR ENERGY HOLDINGS, INC.

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

CHC GP, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

RHC GP, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

FHC GP, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

CVR CHC, LP

By: CHC GP, LLC, as its general partner

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

COMMON ASSETS HOLDCO, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

CVR COMMON ASSETS CVL, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

CVR COMMON ASSETS WYN, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

COMMON SERVICES HOLDCO, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

CVR COMMON SERVICES, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

CVR RHC, LP

By: RHC GP, LLC, as its general partner

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

RENEWABLE ASSETS HOLDCO, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

CVR RENEWABLES CVL, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

CVR RENEWABLES WYN, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

CVR FHC, LP

By: FHC GP, LLC, as its general partner

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

CVR REFINING CVL, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

CVR REFINING WYN, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

CVR RENEWABLES, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

CVR SUPPLY & TRADING, LLC

By: /s/ Dane J. Neumann
Name: Dane J. Neumann
Title: Executive Vice President, Chief Financial Officer, Treasurer & Assistant Secretary
Date: April 12, 2022

SCHEDULE A

Service Recipients

1. Wynnewood Energy Company, LLC a Delaware limited liability company
2. Wynnewood Refining Company, LLC, a Delaware limited liability company
3. Coffeyville Resources Refining & Marketing, LLC, a Delaware limited liability company
4. Coffeyville Resources Crude Transportation, LLC, a Delaware limited liability company
5. Coffeyville Resources Terminal, LLC, a Delaware limited liability company
6. Coffeyville Resources Pipeline, LLC, a Delaware limited liability company
7. CVR Refining, LP, a Delaware limited partnership
8. CVR Refining GP, LLC, a Delaware limited liability company
9. CVR Refining, LLC, a Delaware limited liability company
10. Coffeyville Resources Nitrogen Fertilizers, LLC, a Delaware limited liability company
11. East Dubuque Nitrogen Fertilizers, LLC, a Delaware limited liability company
12. CVR Nitrogen Holdings, LLC, a Delaware limited liability company
13. CVR Nitrogen GP, LLC, a Delaware limited liability company
14. CVR Nitrogen, LP, a Delaware limited partnership
15. CVR Nitrogen Finance Corporation, a Delaware corporation
16. CVR Partners, LP, a Delaware limited partnership
17. CVR GP, LLC, a Delaware limited partnership
18. CVR Energy, Inc., a Delaware corporation
19. Wynnewood Insurance Corporation, a Texas corporation
20. CVR Aviation, LLC, a Delaware limited liability company
21. CVR Energy Holdings, Inc., a Delaware corporation

SCHEDULE B

Joining Parties

1. CHC GP, LLC, a Delaware limited liability company.
2. RHC GP, LLC, a Delaware limited liability company
3. FHC GP, LLC, a Delaware limited liability company.
4. CVR CHC, LP, a Delaware limited partnership.
5. Common Assets Holdco, LLC, a Delaware limited liability company.
6. CVR Common Assets CVL, LLC, a Delaware limited liability company.
7. CVR Common Assets WYN, LLC, a Delaware limited liability company.
8. Common Services Holdco, LLC, a Delaware limited liability company.
9. CVR Common Services, LLC, a Delaware limited liability company.
10. CVR RHC, LP, a Delaware limited partnership.
11. Renewable Assets Holdco, LLC, a Delaware limited liability company.
12. CVR Renewables CVL, LLC, a Delaware limited liability company.
13. CVR Renewables WYN, LLC, a Delaware limited liability company.
14. CVR FHC, LP, a Delaware limited partnership.
15. CVR Refining CVL, LLC, a Delaware limited liability company.
16. CVR Refining WYN, LLC, a Delaware limited liability company.
17. CVR Renewables, LLC, a Delaware limited liability company.
18. CVR Supply & Trading, LLC, a Delaware limited liability company.

Exhibit 31.1

**Certification of President and Chief Executive Officer Pursuant to
Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934,
As Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, David L. Lamp, certify that:

1. I have reviewed this report on Form 10-Q of CVR Energy, Inc.;

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 officers 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 officers 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.

By: /s/ DAVID L. LAMP
David L. Lamp
President and Chief Executive Officer
(Principal Executive Officer)

Date: May 3, 2022

Exhibit 31.2

Certification of Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary
Pursuant to Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934,
As Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Dane J. Neumann, certify that:

1. I have reviewed this report on Form 10-Q of CVR Energy, Inc.;

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 officers 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 officers 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.

By: /s/ DANE J. NEUMANN

Dane J. Neumann
Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary
(Principal Financial Officer)

Date: May 3, 2022

Exhibit 31.3

**Certification of Vice President, Chief Accounting Officer and Corporate Controller
Pursuant to Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934,
As Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, Jeffrey D. Conaway, certify that:

1. I have reviewed this report on Form 10-Q of CVR Energy, Inc.;

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 officers 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 officers 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.

By: /s/ JEFFREY D. CONAWAY
Jeffrey D. Conaway
Vice President, Chief Accounting Officer and Corporate Controller
(Principal Accounting Officer)

Date: May 3, 2022

Exhibit 32.1

Certification Pursuant to 18 U.S.C. Section 1350,
As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the filing of the Quarterly Report of CVR Energy, Inc., a Delaware corporation (the "Company"), on Form 10-Q for the fiscal quarter ended March 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company certify, pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of such officer's knowledge and belief:

1. The Report fully complies with the requirements of Section 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 as of the dates and for the periods expressed in the Report.

By: /s/ DAVID L. LAMP
David L. Lamp
President and Chief Executive Officer
(Principal Executive Officer)

By: /s/ DANE J. NEUMANN
Dane J. Neumann
Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary
(Principal Financial Officer)

By: /s/ JEFFREY D. CONAWAY
Jeffrey D. Conaway
Vice President, Chief Accounting Officer and Corporate Controller
(Principal Accounting Officer)

Dated: May 3, 2022