

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 September 30, 2018

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**

*(State or other jurisdiction of incorporation or organization)*

**2277 Plaza Drive, Suite 500**

**Sugar Land, Texas**

*(Address of principal executive offices)*

**61-1512186**

*(I.R.S. Employer Identification No.)*

**77479**

*(Zip Code)*

**(281) 207-3200**

*(Registrant's telephone number, including area code)*

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 October 23, 2018.

CVR ENERGY, INC. AND SUBSIDIARIES  
INDEX TO QUARTERLY REPORT ON FORM 10-Q  
For The Quarter Ended September 30, 2018

	<u>Page No.</u>
<b><u>Part I. Financial Information</u></b>	
<u>Item 1.</u> <u>Financial Statements</u>	<u>3</u>
<u>Condensed Consolidated Balance Sheets - September 30, 2018 and December 31, 2017</u>	<u>3</u>
<u>Condensed Consolidated Statements of Operations - Three and Nine Months Ended September 30, 2018 and 2017</u>	<u>4</u>
<u>Condensed Consolidated Statements of Cash Flows - Nine Months Ended September 30, 2018 and 2017</u>	<u>5</u>
<u>Notes to the Condensed Consolidated Financial Statements - September 30, 2018</u>	<u>6</u>
<u>Item 2.</u> <u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	<u>23</u>
<u>Item 3.</u> <u>Quantitative and Qualitative Disclosures About Market Risk</u>	<u>45</u>
<u>Item 4.</u> <u>Controls and Procedures</u>	<u>45</u>
<b><u>Part II. Other Information</u></b>	
<u>Item 1.</u> <u>Legal Proceedings</u>	<u>46</u>
<u>Item 1A.</u> <u>Risk Factors</u>	<u>46</u>
<u>Item 6.</u> <u>Exhibits</u>	<u>46</u>
<u>Signatures</u>	<u>47</u>

## PART I. FINANCIAL INFORMATION

## Item 1. Financial Statements

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

(In millions)	September 30, 2018	December 31, 2017
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents (including \$460 and \$223, respectively, of consolidated variable interest entities (“VIEs”))	\$ 702	\$ 482
Accounts receivable of VIEs	214	179
Due from parent	—	5
Inventories of VIEs	427	385
Prepaid expenses and other current assets (including \$35 and \$30, respectively, of VIEs)	47	43
Total current assets	1,390	1,094
Property, plant and equipment, net of accumulated depreciation (including \$2,425 and \$2,548, respectively, of VIEs)	2,441	2,572
Other long-term assets (including \$162 and \$137, respectively, of VIEs)	171	141
Total assets	<u>\$ 4,002</u>	<u>\$ 3,807</u>
<b>LIABILITIES AND EQUITY</b>		
Current liabilities:		
Note payable and capital lease obligations of VIEs	\$ 2	\$ 2
Accounts payable (including \$407 and \$329, respectively, of VIEs)	409	334
Other current liabilities (including \$164 and \$181, respectively, of VIEs)	193	208
Total current liabilities	604	544
Long-term liabilities:		
Long-term debt and capital lease obligations of VIEs, net of current portion	1,166	1,164
Deferred income taxes	347	386
Other long-term liabilities (including \$10 and \$4, respectively, of VIEs)	22	9
Total long-term liabilities	1,535	1,559
Commitments and contingencies (See Note 9)		
Equity:		
CVR stockholders’ equity:		
Common stock \$0.01 par value per share, 350,000,000 shares authorized, 100,629,209 shares issued (86,929,660 shares issued as of December 31, 2017)	1	1
Additional paid-in-capital	1,473	1,197
Retained deficit	(233)	(277)
Treasury stock, 98,610 shares at cost	(2)	(2)
Total CVR stockholders’ equity	1,239	919
Noncontrolling interest	624	785
Total equity	1,863	1,704
Total liabilities and equity	<u>\$ 4,002</u>	<u>\$ 3,807</u>

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 September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Net sales	\$ 1,935	\$ 1,454	\$ 5,386	\$ 4,395
Operating costs and expenses:				
Cost of materials and other	1,561	1,133	4,370	3,582
Direct operating expenses (exclusive of depreciation and amortization as reflected below)	121	160	394	422
Depreciation and amortization	49	51	151	152
Cost of sales	1,731	1,344	4,915	4,156
Selling, general and administrative expenses (exclusive of depreciation and amortization as reflected below)	28	27	83	82
Depreciation and amortization	2	3	8	7
Loss on asset disposals	—	1	5	2
Operating income	174	79	375	148
Interest expense, net	(26)	(28)	(79)	(81)
Gain (loss) on derivatives, net	5	(17)	75	(5)
Other income, net	3	—	6	—
Income before income tax expense	156	34	377	62
Income tax expense	35	9	73	18
Net income	121	25	304	44
Less: Net income attributable to noncontrolling interest	31	3	97	10
Net income attributable to CVR Energy stockholders	\$ 90	\$ 22	\$ 207	\$ 34
Basic and diluted earnings per share	\$ 0.94	\$ 0.26	\$ 2.31	\$ 0.39
Dividends declared per share	\$ 0.75	\$ 0.50	\$ 2.00	\$ 1.50
Weighted-average common shares outstanding:				
Basic and diluted	95.8	86.8	89.8	86.8

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)

(In millions)	Nine Months Ended September 30,	
	2018	2017
Cash flows from operating activities:		
Net income	\$ 304	\$ 44
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	159	159
Deferred income taxes expense	47	15
Share-based compensation	17	10
Other non-cash items	7	7
Changes in assets and liabilities:		
Current assets and liabilities	(30)	92
Non-current assets and liabilities	15	—
Net cash provided by operating activities	519	327
Cash flows from investing activities:		
Capital expenditures	(68)	(80)
Other investing activities	1	(1)
Net cash used in investing activities	(67)	(81)
Cash flows from financing activities:		
Dividends to CVR Energy's stockholders	(162)	(130)
Distributions to CVR Refining's noncontrolling interest holders	(67)	—
Distributions to CVR Partners' noncontrolling interest holders	—	(2)
Other financing activities	(3)	(1)
Net cash used in financing activities	(232)	(133)
Net increase in cash and cash equivalents	220	113
Cash and cash equivalents, beginning of period	482	736
Cash and cash equivalents, end of period	\$ 702	\$ 849

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

## NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(unaudited)

### (1) Organization and Basis of Presentation

#### *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 (“CVR Refining”) and CVR Partners, LP (“CVR Partners”). 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. The Company’s operations include two business segments: the petroleum segment and the nitrogen fertilizer segment. CVR’s common stock is listed on the New York Stock Exchange (“NYSE”) under the symbol “CVI.”

During August 2018, CVR Energy completed an exchange offer whereby public unitholders tendered a total of 21,625,106 CVR Refining common units in exchange for a total of 13,699,549 shares of CVR Energy common stock. In connection with this exchange offer, we incurred a total of \$0.7 million of issuance costs, which were capitalized to additional paid-in-capital. Further, due to the change in our ownership of CVR Refining while maintaining control, we recognized an increase of \$276 million to additional paid-in capital as a result of the reduction of non-controlling interest totaling \$191 million and the recognition of a deferred tax asset totaling \$85 million from changes in book versus tax basis in CVR Refining. As of September 30, 2018, and following the exchange offer, Icahn Enterprises L.P. (“IEP”) and its affiliates owned approximately 71% of the Company’s outstanding shares.

On October 24, 2018, the board of directors of the Company declared a cash dividend for the third quarter of 2018 to the Company’s stockholders of \$0.75 per share, or \$75 million in the aggregate. The dividend will be paid on November 12, 2018 to stockholders of record at the close of business on November 5, 2018. IEP will receive \$54 million in respect of its ownership interest in the Company’s shares.

#### *CVR Refining, LP*

As of September 30, 2018, public security holders held approximately 19% of CVR Refining’s outstanding common units (including units owned by affiliates of IEP, representing approximately 3.9% of CVR Refining’s outstanding common units), CVR Energy, Inc. and CVR Refining Holdings, LLC (“CVR Refining Holdings”), an indirect wholly-owned subsidiary of CVR Energy, owned 100% of CVR Refining’s noneconomic general partner interest and approximately 81% of CVR Refining’s outstanding limited partner interests. The noncontrolling interest reflected on the Condensed Consolidated Balance Sheets of CVR is impacted by the net income of, and distributions from, CVR Refining.

On October 24, 2018, the board of directors of CVR Refining’s general partner declared a cash distribution for the third quarter of 2018 to CVR Refining’s unitholders of \$0.90 per common unit, or \$133 million in aggregate. The cash distribution will be paid on November 12, 2018 to unitholders of record at the close of business on November 5, 2018. The Company will receive \$107 million in respect of its CVR Refining common units.

#### *CVR Partners, LP*

As of September 30, 2018, public security holders held approximately 66% of CVR Partner’s outstanding common units, and Coffeyville Resources, LLC (“CRLLC”), a wholly-owned subsidiary of CVR Energy, held approximately 34% of CVR Refining’s outstanding common units. In addition, CRLLC owns 100% of CVR Partner’s general partner, CVR GP, LLC, which holds a non-economic general partner interest. The noncontrolling interest reflected on the Condensed Consolidated Balance Sheets of CVR is impacted by the net income of, and distributions from, CVR Partners.

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

***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 (the “SEC”). These condensed consolidated financial statements should be read in conjunction with the December 31, 2017 audited consolidated financial statements and notes thereto included in CVR Energy’s Annual Report on Form 10-K for the year ended December 31, 2017, which was filed with the SEC on February 26, 2018 (the “2017 Form 10-K”). Our condensed consolidated financial statements include the consolidated results of CVR Refining and CVR Partners, which are defined as variable interest entities.

In the opinion of the Company’s management, the accompanying condensed consolidated financial statements reflect all adjustments that are necessary to fairly present the financial position of the Company as of September 30, 2018 and December 31, 2017, the results of operations of the Company for the three and nine month periods ended September 30, 2018 and 2017 and the cash flows of the Company for the nine month periods ended September 30, 2018 and 2017. Such adjustments are of a normal recurring nature, unless otherwise disclosed. Certain information has been reclassified to present historical information in a manner consistent 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, 2018 or any other interim or annual period.

**(2) Recent Accounting Pronouncements**

***Adoption of New Revenue Standard***

On January 1, 2018, the Company adopted Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) Topic 606, “*Revenue from Contracts with Customers*” (“ASC 606”) using the modified retrospective method applied to contracts which were not completed as of January 1, 2018. The standard was applied prospectively and the comparative information for 2017 has not been restated and continues to be reported under the accounting standards in effect for the prior period. The Company did not identify any material differences in its existing revenue recognition methods that require modification under the new standard and, as such, a cumulative effect adjustment of applying the standard using the modified retrospective method was not recorded.

***Impact on Financial Statements***

The Company identified presentation changes associated with contracts requiring customer prepayment prior to delivery and the need to gross up certain fees collected from customers. Prior to adoption of ASC 606, deferred revenue was recorded by CVR Partners upon customer prepayment. Under the new revenue standard, a receivable and associated deferred revenue is recorded at the point in time in which a prepaid contract is legally enforceable and the associated right to consideration is unconditional. The adoption of ASC 606 resulted in a \$21 million increase to deferred revenue and accounts receivable as of January 1, 2018. After the effect of adoption of the new revenue standard, deferred revenue and accounts receivable of CVR Partners were \$34 million and \$31 million, respectively, as of January 1, 2018. Additionally, fees collected from certain customers were previously recorded as a reduction to cost of materials and other. The particular fee, the Oil Spill Liability Tax, relates to taxes imposed on refineries as part of the crude oil procurement process, is charged to certain of CVR Refining’s customers on product sales and is required under the new standard to be included in the transaction price. The impact of the change in presentation was an increase of \$1 million to net sales and cost of materials and other for the three and nine months ended September 30, 2018.

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

The following tables display the effect of the changes to the Condensed Consolidated Balance Sheet as of September 30, 2018 for the adoption of ASC 606. The Company's Condensed Consolidated Statement of Cash Flows was not impacted due to the adoption of ASC 606 for the three and nine months ended September 30, 2018.

<u>Balance Sheet</u>	September 30, 2018		
	As Reported	Balances Without Adoption of ASC 606	Effect of Change
(In millions)			
<u>Assets</u>			
Accounts Receivable	\$ 214	\$ 207	\$ 7
<u>Liabilities</u>			
Deferred Revenue	\$ 32	\$ 25	\$ 7

***New Accounting Standards Issued But Not Yet Implemented***

In February 2016, the FASB issued ASU No. 2016-02, "Leases" ("ASU 2016-02"), creating a new topic, FASB ASC Topic 842, "Leases" ("Topic 842"), which supersedes lease requirements in FASB ASC Topic 840, "Leases". The new standard revises accounting for operating leases by a lessee, among other changes, and requires a lessee to recognize a liability related to future lease payments and an asset representing its right to use of the underlying asset for the lease term on the balance sheet. Quantitative and qualitative disclosures, including disclosures regarding significant judgments made by management, will be required. In July 2018, the FASB issued updated guidance which provides entities with an additional transition method to adopt Topic 842. Under the new transition method, an entity initially applies the new leases standard at the adoption date, versus at the beginning of the earliest period presented, and recognizes a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. The Company expects to elect this transition method at the adoption date of January 1, 2019. The Company also plans to elect the short-term lease exception provided for in the standard and therefore will only recognize right-of-use assets and lease liabilities for leases with a term greater than one year. The Company continues to focus its implementation efforts on accounting policy and disclosure updates and system implementation necessary to meet the standard's requirements. Based on information available to date, the Company estimates the operating lease right of use asset and lease liability may approximate \$50.0 - \$100.0 million upon adoption. This preliminary estimate of the effect on the Company's Consolidated Balance Sheets as a result of implementing the standard on January 1, 2019 could differ materially depending on guidance changes from the FASB, changes in outstanding leases, final verification of the Company's lease accounting estimates, and any changes in the Company's plans to elect certain practical expedients. The Company does not expect the adoption of this standard to have a material impact on the recognition, measurement or presentation of amounts within the Condensed Consolidated Statements of Operations and the Condensed Consolidated Statements of Cash Flows.

In August 2018, the FASB issued ASU 2018-15, Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40). This ASU addresses customer's accounting for implementation costs incurred in a cloud computing arrangement that is a service contract and also adds certain disclosure requirements related to implementation costs incurred for internal-use software and cloud computing arrangements. The amendment aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal-use software license). This standard is effective for the Company beginning January 1, 2020, with early adoption permitted. The amendments in this standard can be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. The Company is evaluating the effect of adopting this new accounting guidance on its consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13, Fair Value Measurement (Topic 820). The ASU eliminates such disclosures as the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy. Certain disclosures are required to be applied on a retrospective basis and others on a prospective basis. This standard is effective for the Company beginning January 1, 2020, with early adoption permitted. The Company is evaluating the effect of adopting this new accounting guidance, but does not expect adoption will have a material impact on the Company's disclosures.

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

**(3) Revenue**

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

(In millions)	Three Months Ended September 30, 2018			
	Petroleum	Nitrogen Fertilizer	Other / Eliminations	Consolidated
<b>Major Product</b>				
Gasoline	\$ 951	\$ —	\$ —	\$ 951
Distillates (a)	840	—	—	840
Ammonia	—	11	—	11
UAN	—	53	—	53
Urea products	—	5	—	5
Freight revenue	6	9	—	15
Other (b)	47	2	(2)	47
Revenue from product sales	1,844	80	(2)	1,922
Crude oil sales	12	—	—	12
Other revenue	1	—	—	1
Total revenue	\$ 1,857	\$ 80	\$ (2)	\$ 1,935

(In millions)	Nine Months Ended September 30, 2018			
	Petroleum	Nitrogen Fertilizer	Other / Eliminations	Consolidated
<b>Major Product</b>				
Gasoline	\$ 2,558	\$ —	\$ —	\$ 2,558
Distillates (a)	2,324	—	—	2,324
Ammonia	—	51	—	51
UAN	—	157	—	157
Urea products	—	15	—	15
Freight revenue	17	24	—	41
Other (b)	161	6	(6)	161
Revenue from product sales	5,060	253	(6)	5,307
Crude oil sales	75	—	—	75
Other revenue	4	—	—	4
Total revenue	\$ 5,139	\$ 253	\$ (6)	\$ 5,386

(a) Distillates consist primarily of diesel fuel, kerosene and jet fuel.

(b) Other revenue consists primarily of feedstock and asphalt sales and Cushing, OK storage tank lease revenue. See Note 6 (Property, Plant and Equipment) for further discussion.

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

*Petroleum*

The petroleum segment's revenue from product sales is recorded upon delivery of the products to customers, which is the point at which title is transferred and the customer has assumed the risk of loss. This generally takes place as product passes into the pipeline, as a product transfer order occurs within a pipeline system, or as product enters equipment or locations supplied or designated by the customer. The petroleum segment has elected to apply the sales tax practical expedient, whereby qualifying excise and other taxes collected from customers and remitted to governmental authorities are not included in reported revenues.

Many of the petroleum segment's contracts have index-based pricing which is considered variable consideration that should be estimated in determining the transaction price. The petroleum segment determined that it does not need to estimate the variable consideration because the uncertainty related to the consideration is resolved on the pricing date or the date when the product is delivered.

The petroleum segment may incur broker commissions or transportation costs prior to product transfer on some of its sales. The petroleum segment has elected to apply the practical expedient allowing it to expense the broker costs since the contract durations are less than a year in length. Transportation costs are accounted for as fulfillment costs and are expensed as incurred since they do not meet the requirement for capitalization.

The petroleum segment's contracts with its customers state the terms of the sale, including the description, quantity, and price of each product sold. Depending on the product sold, payment from customers is generally due in full within 2 to 32 days of product delivery or invoice date. The petroleum segment's contracts with customers commonly include a provision which states that the petroleum segment will accept customer returns of off-spec product, refund the customer (or provide on-spec product), and pay for damages to any customer equipment which resulted from the off-spec product. Typically, if the customer is not satisfied with the product, the price is adjusted downward instead of the product being returned or exchanged. The petroleum segment has determined that product returns or refunds are very rare and will account for them as they occur. The petroleum segment generally provides no warranty other than the implicit promise that goods delivered are free of liens and encumbrances and meet the agreed upon specification.

Freight revenue recognized by the petroleum segment is primarily tariff and line loss charges rebilled to customers to reimburse the petroleum segment for expenses incurred from a pipeline operator. An offsetting expense is included in cost of materials and other.

*Nitrogen Fertilizer*

The nitrogen fertilizer segment sells its products on a wholesale basis under a contract or by purchase order. The nitrogen fertilizer segment's contracts with customers, including purchase orders, generally contain fixed pricing and most have terms of less than one year. The nitrogen fertilizer segment recognizes revenue at the point in time at which the customer obtains control of the product, which is generally upon delivery and acceptance by the customer. The customer acceptance point is stated in the contract and may be at one of the nitrogen fertilizer segment's manufacturing facilities, at one of the nitrogen fertilizer segment's off-site loading facilities, or at the customer's designated facility. Freight revenue recognized by the nitrogen fertilizer segment represents the pass-through finished goods delivery costs incurred prior to customer acceptance and is reimbursed by customers. An offsetting expense for freight is included in cost of materials and other. Qualifying taxes collected from customers and remitted to governmental authorities are not included in reported revenues.

Depending on the product sold and the type of contract, payments from customers are generally either due prior to delivery or within 15 to 30 days of product delivery.

The nitrogen fertilizer segment generally provides no warranty other than the implicit promise that goods delivered are free of liens and encumbrances and meet the agreed upon specifications. Product returns are rare, and as such, the nitrogen fertilizer segment does not record a specific warranty reserve or consider activities related to such warranty, if any, to be a separate performance obligation.

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

The nitrogen fertilizer segment has an immaterial amount of variable consideration for contracts with an original duration of less than a year. A small portion of the nitrogen fertilizer partnership's revenue includes contracts extending beyond one year, some of which contain variable pricing in which the majority of the variability is attributed to the market-based pricing. The nitrogen fertilizer segment's contracts do not contain a significant financing component.

The nitrogen fertilizer segment has an immaterial amount of fee-based revenue, included in other revenue in the table above, that is recognized based on the net amount of the proceeds received, consistent with prior accounting practice.

***Transaction price allocated to remaining performance obligations***

As of September 30, 2018, CVR Partners had approximately \$12 million of remaining performance obligations for contracts with an original expected duration of more than one year. CVR Partners expects to recognize approximately 51% of these performance obligations as revenue by the end of 2019, an additional 25% by 2020 and the remaining balance thereafter.

***Contract balances***

The CVR Partners' deferred revenue is a contract liability that primarily relates to fertilizer sales contracts requiring customer prepayment prior to product delivery to guarantee a price and supply of nitrogen fertilizer. Deferred revenue is recorded at the point in time in which a prepaid contract is legally enforceable and the associated right to consideration is unconditional prior to transferring product to the customer. An associated receivable is recorded for uncollected prepaid contract amounts. Contracts requiring prepayment are generally short-term in nature and, as discussed above, revenue is recognized at the point in time in which the customer obtains control of the product.

A summary of CVR Partners' deferred revenue activity during the nine months ended September 30, 2018 is presented below:

(In millions)	<b>Nine Months Ended September 30,</b>
Balance at January 1, 2018	\$ 34
Add:	
New prepay contracts entered into during the period	36
Less:	
Revenue recognized that was included in the contract liability balance at the beginning of the period	34
Revenue recognized related to contracts entered into during the period	4
Balance at September 30, 2018	<u>\$ 32</u>

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

**(4) Share-Based Compensation**

There have been no material new awards or changes in existing awards during 2018. A summary of share-based compensation expense during the three and nine months ended September 30, 2018 and 2017 are presented below:

(In millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
<b>CVR Energy LTIP</b>				
Performance Unit Award	\$ 1	\$ 1	\$ 3	\$ 3
<b>CVR Refining LTIP</b>				
Phantom Units Award	1	1	8	4
<b>CVR Partners LTIP</b>				
Phantom Units Award	1	—	2	1
<b>Incentive Unit Awards</b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>3</b>
Total Share-Based Compensation Expense	<u>\$ 5</u>	<u>\$ 3</u>	<u>\$ 17</u>	<u>\$ 11</u>

**(5) Inventories**

(In millions)	September 30, 2018	December 31, 2017
Raw materials and precious metals	\$ 139	\$ 114
In-process inventories	19	22
Finished goods	195	172
Parts and supplies	74	77
Total Inventories	<u>\$ 427</u>	<u>\$ 385</u>

**(6) Property, Plant and Equipment**

(In millions)	September 30, 2018	December 31, 2017
Land and improvements	\$ 43	\$ 48
Buildings	82	83
Machinery and equipment	3,741	3,734
Other	160	138
	<u>4,026</u>	<u>4,003</u>
Less: Accumulated depreciation	1,585	1,431
Total property, plant and equipment, net	<u>\$ 2,441</u>	<u>\$ 2,572</u>

Capitalized interest recognized as a reduction in interest expense was immaterial for the three and nine month periods ended September 30, 2018 and 2017.

During the period, we began actively marketing assets with a carrying value of \$33 million at September 30, 2018. The carrying value of these assets held for sale were included in other long-term assets on our Condensed Consolidated Balance Sheets. No loss was recognized upon designation of these assets as held for sale.

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

**(7) Long-Term Debt**

**Debt Balance, Net of Current Maturities and Unamortized Issuance Costs**

(In millions)	September 30, 2018	December 31, 2017
6.50% Senior Notes due 2022 (a)	\$ 500	\$ 500
9.25% Senior Secured Notes due 2023 (b)	645	645
6.50% Senior Notes due 2021	2	2
Capital lease obligations	43	45
Total long-term debt, before debt issuance costs, discount and current portion of capital lease obligations	1,190	1,192
Less:		
Unamortized debt issuance cost and debt discount	(22)	(26)
Current portion of capital lease obligations	(2)	(2)
Long-term debt, net of current portion	<u>\$ 1,166</u>	<u>\$ 1,164</u>

- (a) The estimated fair value of total long-term debt outstanding was approximately \$508 million and \$515 million as of September 30, 2018 and December 31, 2017, respectively.
- (b) The estimated fair value of total long-term debt outstanding was approximately \$684 million and \$694 million as of September 30, 2018 and December 31, 2017, respectively.

	Total Capacity	Amount Borrowed as of September 30, 2018	Outstanding Letters of Credit	Available Capacity as of September 30, 2018	Maturity Date
Amended and Restated Asset Based (ABL) Credit Facility (c)	\$ 400	\$ —	\$ 6	\$ 394	November 14, 2022
Asset Based (ABL) Credit Facility (d)	50	—	—	50	September 30, 2021

- (c) Loans under the Amended and Restated ABL Credit Facility initially bear interest at an annual rate equal to (i) 1.50% plus LIBOR or (ii) 0.50% plus a base rate, subject to quarterly excess availability.
- (d) Loans under the ABL Credit Facility initially bear interest at an annual rate equal to (i) 2.00% plus LIBOR or (ii) 1.00% plus a base rate, subject to a 0.50% step-down based on the previous quarter's excess availability.

The Company is in compliance with all covenants of the ABL credit facilities and the senior notes as of September 30, 2018.

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

**(8) Supplemental Cash Flow Information**

Cash flows related to income taxes, interest, construction in process and dividends were as follows:

(In millions)	Nine Months Ended September 30,	
	2018	2017
<b>Supplemental disclosures:</b>		
Cash paid for income taxes, net of refunds	\$ 13	\$ 10
Cash paid for interest	55	56
<b>Non-cash investing and financing activities:</b>		
Construction in progress additions included in accounts payable	\$ 10	\$ 8
Change in accounts payable related to construction in progress additions	2	9
Landlord incentives for leasehold improvements	—	1

**(9) Commitments and Contingencies**

There have been no material changes in the Company's commitments and contingencies disclosed in the 2017 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.

***Crude Oil Supply Agreement***

On August 31, 2012, Coffeyville Resources Refining and Marketing, LLC ("CRRM"), a wholly-owned subsidiary of CVR Refining, and Vitol Inc. ("Vitol") entered into an Amended and Restated Crude Oil Supply Agreement (as amended, the "Vitol Agreement"). Under the Vitol Agreement, Vitol supplies the petroleum business with crude oil and intermediation logistics, which helps to reduce CVR Refining's inventory position and mitigate crude oil pricing risk. The Vitol Agreement will automatically renew for successive one-year terms (each such term, a "Renewal Term") unless either party provides the other with notice of nonrenewal at least 180 days prior to the expiration of any Renewal Term. The Vitol Agreement currently extends through December 31, 2019.

***Renewable Fuel Standards***

CVR Refining is subject to the Renewable Fuel Standard ("RFS") of the Environmental Protection Agency ("EPA"), which requires refiners to either blend "renewable fuels" in with their transportation fuels or purchase renewable fuel credits, known as renewable identification numbers ("RINs"), in lieu of blending. Due to mandates in the RFS requiring increasing volumes of renewable fuels to replace petroleum products in the U.S. transportation fuel market, there may be a decrease in demand for petroleum products. CVR Refining is not able to blend the substantial majority of its transportation fuels and has to purchase RINs on the open market, as well as waiver credits for cellulosic biofuels from the EPA, in order to comply with the RFS.

The price of RINs has been extremely volatile over several years. The cost of RINs is dependent upon a variety of factors, which include the availability of RINs for purchase, the price at which RINs can be purchased, transportation fuel production levels, the mix of the petroleum business' petroleum products, as well as the fuel blending performed at its refineries and downstream terminals, all of which can vary significantly from period to period.

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

The net cost of RINs for the three months ended September 30, 2018 and 2017 was \$20 million and \$64 million, respectively. The net cost of RINs for the nine months ended September 30, 2018 and 2017 was \$47 million and \$164 million, respectively. The net costs of RINs was a reduction to cost of materials and other in the Condensed Consolidated Statements of Operations. RINs expense includes the purchased cost of RINs, the impact of recognizing CVR Refining's uncommitted biofuel blending obligation at fair value based on market prices at each reporting date and is reduced by the valuation change of RINs purchases in excess of CVR Refining's RFS obligation as of the reporting date. During the three and nine months ended September 30, 2018, the net cost of RINs was favorably impacted by a reduction in CVR Refining's RFS obligation and reduced market pricing. As of September 30, 2018 and December 31, 2017, CVR Refining's biofuel blending obligation was approximately \$7 million and \$28 million, respectively, which was recorded in other current liabilities on the Condensed Consolidated Balance Sheets. CVR Refining recorded a RINs asset within prepaid and other current assets in the Condensed Consolidated Balance Sheet of \$4 million, representing excess RINs primarily due to a reduction in its RFS obligation during the first quarter of 2018.

***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 Renewable Fuel Standard ("RFS") and Mr. Icahn's former role as an advisor to the President. CVR Energy is cooperating 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 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.

On August 21, 2018, CRRM received a letter from the United States Department of Justice ("DOJ") on behalf of the EPA and Kansas Department of Health and Environment ("KDHE") alleging violations of the Clean Air Act ("CAA") and a 2012 Consent Decree between CRRM, the United States (on behalf of EPA) and KDHE at CRRM's Coffeyville refinery. In September 2018, CRRM executed a tolling agreement with the DOJ and KDHE extending time for negotiation regarding the agencies' allegations through March 31, 2019. At this time the Company cannot reasonably estimate the potential penalties, costs, fines or other expenditures that may result from this matter or any subsequent enforcement or litigation relating thereto and, therefore, the Company cannot determine if the ultimate outcome of this matter will have a material impact on the Company's financial position, results of operations or cash flows.

In 2018, CVR Partners submitted a business interruption claim for losses under its insurance policies, related to damage and resulting reduced equipment production rates experienced during the second half of 2017 and early 2018. At this time, the Company cannot estimate either the outcome of this claim or the timing of any potential recoveries.

In September 2018, the Kansas Court of Appeals upheld property tax determinations by the Kansas Board of Tax Appeals in connection with CVR Partners' dispute with Montgomery County, Kansas over prior year property tax payments as previously disclosed. CVR Partners continues to monitor this matter.

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

***Affiliate Pension Obligations***

Prior to the exchange offer discussed in Note 1, Mr. Carl C. Icahn, through certain affiliates, owned approximately 82% of the Company's capital stock. Applicable pension and tax laws make each member of a "controlled group" of entities, generally defined as entities in which there is at least an 80% common ownership interest, jointly and severally liable for certain pension plan obligations of any member of the controlled group. These pension obligations include ongoing contributions to fund the plan, as well as liability for any unfunded liabilities that may exist at the time the plan is terminated. As a result of the historical ownership interest in CVR Energy by Mr. Icahn's affiliates (prior to the exchange offer), the Company was subject to the pension liabilities of all entities in which Mr. Icahn had a direct or indirect ownership interest of at least 80%. Two such entities, ACF Industries LLC ("ACF") and Federal-Mogul, are the sponsors of several pension plans. As members of the controlled group, CVR Energy would be liable for any failure of ACF and Federal-Mogul to make ongoing pension contributions or to pay the unfunded liabilities upon a termination of their respective pension plans. The unfunded plan balances for these sponsors was \$435 million and \$424 million as of June 30, 2018 and December 31, 2017, respectively. These results are based on the information provided by Mr. Icahn's affiliates based on information from the plans' actuaries. As of September 30, 2018, and following the exchange offer, Mr. Icahn's affiliates own approximately 71% of the Company's capital stock and, therefore the Company is no longer considered to be liable for the aforementioned pension obligations of the controlled group. On October 1, 2018, Federal-Mogul was sold by Mr. Icahn's affiliates to a third party.

**(10) 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 at fair value on a recurring basis, by input level, as of September 30, 2018 and December 31, 2017:

<u>Location and Description</u> (In millions)	September 30, 2018			
	Level 1	Level 2	Level 3	Total
Cash equivalents	\$ 50	\$ —	\$ —	\$ 50
Total Assets	\$ 50	\$ —	\$ —	\$ 50
Other current liabilities (commodity derivatives)	\$ —	\$ (30)	\$ —	\$ (30)
Other current liabilities (biofuel blending obligation)	—	(2)	—	(2)
Total Liabilities	\$ —	\$ (32)	\$ —	\$ (32)

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

<u>Location and Description</u> (In millions)	December 31, 2017			
	Level 1	Level 2	Level 3	Total
Cash equivalents	\$ 15	\$ —	\$ —	\$ 15
Total Assets	\$ 15	\$ —	\$ —	\$ 15
Other current liabilities (commodity derivatives)	\$ —	\$ (64)	\$ —	\$ (64)
Other long-term liabilities (biofuel blending obligation)	—	(1)	—	(1)
Total Liabilities	\$ —	\$ (65)	\$ —	\$ (65)

As of September 30, 2018 and December 31, 2017, the only financial assets and liabilities that are measured at fair value on a recurring basis are the Company's cash equivalents, investments, derivative instruments and the uncommitted biofuel blending obligation. Additionally, the fair value of the Company's debt issuances is disclosed in Note 7 ("Long-Term Debt").

CVR Refining's commodity derivative contracts and the uncommitted biofuel blending 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 and liabilities between any of the above levels during the nine months ended September 30, 2018.

**(11) Derivative Financial Instruments**

CVR Refining and CVR Partners 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, CVR Refining from time to time enters into various commodity derivative transactions. CVR Refining does not apply hedge accounting with respect to derivative instruments held. Gains or losses related to the change in fair value and periodic settlements of these derivative instruments are classified as gain (loss) on derivatives, net in the Condensed Consolidated Statements of Operations.

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

CVR Refining has adopted accounting standards which impose extensive record-keeping requirements in order to designate a derivative financial instrument as a hedge. CVR Refining holds derivative instruments, such as exchange-traded crude oil futures and certain 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 and upon settlement.

CVR Refining enters into commodity swap contracts in order to fix the margin on a portion of future production. Additionally, CVR Refining may enter into price and basis swaps in order to fix the price on a portion of its commodity purchases and product sales. The physical volumes are not exchanged and these contracts are net settled with cash. The contract fair value of the commodity swaps is reflected on the Condensed Consolidated Balance Sheets with changes in fair value currently recognized in the Condensed Consolidated Statements of Operations. Quoted prices for similar assets or liabilities in active markets (Level 2) are considered to determine the fair values for the purpose of marking to market the hedging instruments at each period end. The fair value of the outstanding contracts at September 30, 2018 and December 31, 2017 was a net unrealized loss of \$30 million and \$64 million, respectively, all of which was included in other current liabilities. A change of \$1.00 per barrel in the fair value of the benchmark crude or product basis would result in an increase or decrease in the related fair value of the commodity instruments and forward purchase and sale commitments of \$1 million.

**Gain (Loss) on Derivatives**

(In millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Gain (loss) on derivatives, net:				
Forward purchases	\$ 4	\$ —	\$ 33	\$ —
Swaps	—	(17)	43	(5)
Futures	1	—	(1)	—
Total gain (loss) on derivatives, net	\$ 5	\$ (17)	\$ 75	\$ (5)

**Open Commodity Derivative Instruments**

(In millions of barrels)	September 30, 2018	December 31, 2017
Commodity Swap Instruments:		
2-1-1 Crack spreads	—	7
Distillate Crack spreads	—	4
Gasoline Crack spreads	—	4
Purchase and Sale Commitments:		
Canadian crude oil	2	6

**Offsetting Assets and Liabilities**

The commodity swap agreements discussed above include multiple derivative positions with a number of counterparties for which CVR Refining has entered into agreements governing the nature of the derivative transactions. Each of the counterparty agreements provides for the right to setoff each individual derivative position to arrive at the net receivable due from the counterparty or payable owed by CVR Refining. As a result of the right to setoff, CVR Refining's recognized assets and liabilities associated with the outstanding commodity swap derivative positions have been presented net in the Condensed Consolidated Balance Sheets. The tables below outline the gross amounts of the recognized assets and liabilities and the gross amounts offset in the Condensed Consolidated Balance Sheets for the various types of open derivative positions at CVR Refining.

The offsetting assets and liabilities for CVR Refining's derivatives as of September 30, 2018 and December 31, 2017 are recorded as current assets and current liabilities in prepaid expenses and other current assets and accrued expenses and other current liabilities, respectively, in the Condensed Consolidated Balance Sheets as follows:

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

(In millions)	Derivative Assets		Derivative Liabilities	
	September 30, 2018	December 31, 2017	September 30, 2018	December 31, 2017
Commodity Derivatives	\$ 5	\$ 7	\$ 35	\$ 71
Less: Counterparty Netting	(5)	(7)	(5)	(7)
<b>Total Net Fair Value of Derivatives</b>	<b>\$ —</b>	<b>\$ —</b>	<b>\$ 30</b>	<b>\$ 64</b>

Commodity derivatives include commodity swaps and forward purchase and sale commitments. There were no outstanding commodity swap positions as of September 30, 2018.

**(12) Shareholders Equity**

The following table summarizes the shareholders equity and the Non-Controlling interest for the nine months ended September 30, 2018.

(In millions)	Total CVR Stockholders' Equity	Noncontrolling Interest	Total Equity
Balance at December 31, 2017	\$ 919	\$ 785	\$ 1,704
Net income	207	97	304
Additional paid-in capital impact of CVRR units exchange	276	(191)	85
Dividends to CVR Energy stockholders	(162)	—	(162)
Distributions to CVR Refining public unitholders	—	(67)	(67)
Other	(1)	—	(1)
<b>Balance at September 30, 2018</b>	<b>\$ 1,239</b>	<b>\$ 624</b>	<b>\$ 1,863</b>

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

**(13) Related Party Transactions**

***Icahn Enterprises***

The following is a summary of dividends paid to the Company's stockholders, including IEP, for the respective quarters to which the distributions relate:

<u>(In millions, except per share data)</u>	December 31, 2017	March 31, 2018	June 30, 2018	Total Dividends Paid in 2018
Amount paid to IEP	\$ 36	\$ 36	\$ 53	\$ 125
Amount paid to public stockholders	7	8	22	37
Total amount paid	<u>\$ 43</u>	<u>\$ 44</u>	<u>\$ 75</u>	<u>\$ 162</u>
Per common share	\$ 0.50	\$ 0.50	\$ 0.75	\$ 1.75
Shares outstanding <u>(in millions)</u>	86.8	86.8	100.6	

CVR Refining has made distributions to IEP of \$10 million for the nine months ended September 30, 2018 relating to the three preceding quarters.

Activity associated with the Company's related party arrangements for the three and nine month periods ended September 30, 2018 and 2017 is summarized below:

**Expenses with related parties**

<u>(in millions)</u>	<u>Three Months Ended September 30,</u>		<u>Nine Months Ended September 30,</u>	
	<u>2018</u>	<u>2017</u>	<u>2018</u>	<u>2017</u>
<b><u>Cost of materials and other</u></b>				
Railcar Lease Agreements and Maintenance:				
ARI Leasing, LLC	\$ —	\$ —	\$ 1	\$ 1

**Payments made**

Insight Portfolio Group	—	—	—	—
Tax Allocation Agreement:				
American Entertainment Properties Corporation	\$ 5	\$ —	\$ 13	\$ 10

**Amounts due to/from related parties**

<u>(in millions)</u>	<u>September 30, 2018</u>	<u>December 31, 2017</u>
<b><u>Accounts Receivable (Payable)</u></b>		
Tax Allocation Agreement:		
American Entertainment Properties Corporation ("AEPC")	\$ —	\$ 5

***Tax Allocation Agreement***

CVR has been a member of the consolidated federal tax group of American Entertainment Properties Corporation ("AEPC"), an affiliate of IEP, and party to a tax allocation agreement with AEPC (the "Tax Allocation Agreement"). The Tax Allocation Agreement provides that AEPC will pay all consolidated federal income taxes on behalf of the consolidated tax group. CVR is required to make payments to AEPC in an amount equal to the tax liability, if any, that it would have paid if it were to file as a consolidated group separate and apart from AEPC.

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

As a result of the exchange offer discussed in Note 1, AEPC's ownership of CVR has been reduced below 80% and CVR is no longer eligible to file as a member of the AEPC consolidated federal income tax group subsequent to the exchange. Beginning with the tax period after the exchange, CVR will become the parent of a new consolidated group for U.S. federal income tax purposes, and will file and pay its federal income tax obligations directly with the IRS. Pursuant to the terms of the Tax Allocation Agreement, however, CVR may be required to make payments in respect of taxes owed by AEPC for periods prior to the exchange. Similar principles may apply for state or local income tax purposes where CVR filed combined, consolidated or unitary tax returns with AEPC.

**(14) 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 and EBITDA. For the purposes of the operating segment disclosure, the company presents operating income as it is the most comparable measure to the amounts presented on the condensed consolidated statement of operations. The other segment reflects 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:

(in millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
<b>Net sales</b>				
Petroleum	\$ 1,857	\$ 1,386	\$ 5,139	\$ 4,148
Nitrogen Fertilizer	80	69	253	253
Other	(2)	(1)	(6)	(6)
Total	\$ 1,935	\$ 1,454	\$ 5,386	\$ 4,395
<b>Operating Income</b>				
Petroleum	\$ 176	\$ 99	\$ 390	\$ 157
Nitrogen Fertilizer	3	(16)	(1)	2
Other	(5)	(4)	(14)	(11)
Total operating income	174	79	375	148
Interest expense, net	(26)	(28)	(79)	(81)
Loss on derivatives, net	5	(17)	75	(5)
Other income, net	3	—	6	—
Earnings before income taxes	\$ 156	\$ 34	\$ 377	\$ 62
<b>Depreciation and amortization</b>				
Petroleum	34	33	101	100
Nitrogen Fertilizer	16	20	53	55
Other	1	1	5	4
Total	\$ 51	\$ 54	\$ 159	\$ 159
<b>Capital expenditures</b>				
Petroleum	\$ 18	\$ 19	\$ 50	\$ 66
Nitrogen Fertilizer	6	3	15	11
Other	2	1	3	3
Total	\$ 26	\$ 23	\$ 68	\$ 80

The following table summarizes total assets by segment:

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

(in millions)	As of September 30, 2018	As of December 31, 2017
<b>Total assets</b>		
Petroleum	\$ 2,505	\$ 2,270
Nitrogen Fertilizer	1,219	1,234
Other	278	303
<b>Total</b>	\$ 4,002	\$ 3,807

## **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 the unaudited condensed consolidated financial statements and related notes and with the statistical information and financial data appearing in this Report, as well as our Annual Report on Form 10-K for the year ended December 31, 2017 filed with the Securities and Exchange Commission ("SEC") on February 26, 2018 (the "2017 Form 10-K"). Results of operations and cash flows for the three and nine months ended September 30, 2018 are not necessarily indicative of results to be attained for any other period. Refer to the section outlined "Forward looking statements".

### **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 and CVR Partners. 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 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 September 30, 2018, we owned the general partner and approximately 81% and 34% respectively, of the outstanding common units representing limited partner interests in each of CVR Refining and CVR Partners. As of September 30, 2018, Icahn Enterprises L.P. and its affiliates owned approximately 71% of our outstanding common stock.

During August 2018, CVR Energy completed an exchange offer whereby public unitholders tendered a total of 21,625,106 CVR Refining common units in exchange for a total of 13,699,549 shares of CVR Energy common stock. In connection with this exchange offer, we incurred \$0.6 million, and CVR Refining Holdings incurred \$0.1 million of costs, which were capitalized to additional paid-in-capital. Further, additional paid-in-capital was increased by \$276 million associated with a non-controlling interest adjustment from this exchange offer. As of September 30, 2018, and following this exchange offer, Icahn Enterprises L.P. ("IEP") and its affiliates owned approximately 71% of the Company's outstanding shares.

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

### **Major Influences on Results of Operations**

#### ***Petroleum Business***

The earnings and cash flows for the petroleum business 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 petroleum products, such as gasoline, diesel fuel and jet fuel, that are produced by a refinery ("refined products"). The cost to acquire crude oil and other feedstocks and the price for which refined products are ultimately sold depend on factors beyond the petroleum business' 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, 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 business applies first-in, first-out ("FIFO") accounting to value its inventory, crude oil price movements may impact net income in the short term fluctuations in the market price of inventory. The effect of changes in crude oil prices on the petroleum business' results of operations is influenced by the rate at which the prices of refined products adjust 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, local market conditions and the operating levels of competing refineries. Crude oil costs and the prices of refined products have historically been subject to wide fluctuations. Widespread expansion or upgrades of competitors' 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 markets.

In addition to current market conditions, there are long-term factors that may impact the demand for refined products. These factors include mandated renewable fuels standards, proposed climate change laws and regulations and increased mileage standards for vehicles. The petroleum business is also subject to the Renewable Fuel Standard (“RFS”) of the Environmental Protection Agency (“EPA”), which requires blending “renewable fuels” with transportation fuels or purchase renewable identification numbers (“RINs”), in lieu of blending, by March 31, 2019 or otherwise be subject to penalties. The cost of RINs is dependent upon a variety of factors, which include the availability of RINs for purchase, the price at which RINs can be purchased, transportation fuel production levels, the mix of our products, as well as the fuel blending performed at our refineries and downstream terminals, all of which can vary significantly from period to period. Based upon recent market prices of RINs and current estimates related to the other variable factors, we currently estimate that the net cost of RINs will be approximately \$60 to 65 million for the year ending December 31, 2018.

The petroleum business’ refineries generally require a facility turnaround every four to five years. The length of the turnaround is contingent upon the scope of work to be completed. The next turnaround scheduled for the Wynnewood refinery is being performed as a two phase turnaround. The first phase of its current turnaround was completed in November 2017 at a total cost of approximately \$67 million. The second phase of the Wynnewood turnaround is expected to occur in the first half of 2019. Turnaround expenses associated with the second phase of the Wynnewood turnaround are estimated to be approximately \$25 million. In addition to the two phase turnaround, certain planned turnaround activities at Wynnewood were accelerated in the first quarter of 2017 on the hydrocracker unit for a catalyst change-out resulting in expense of approximately \$13 million. The next turnaround scheduled for the Coffeyville refinery is expected to be performed in the first half of 2020.

### ***Nitrogen Fertilizer Business***

In the nitrogen fertilizer business, earnings and cash flows from operations are primarily affected by the relationship between nitrogen fertilizer product prices, on-stream factors and operating costs and expenses.

The price at which nitrogen fertilizer products are ultimately sold depends on numerous factors, including the global supply and demand for nitrogen fertilizer products which, in turn, depends on, among other factors, world grain demand and production levels, changes in world population, the cost and availability of fertilizer transportation infrastructure, weather conditions, the availability of imports and the extent of government intervention in agriculture markets. Nitrogen fertilizer prices are also affected by local factors, including local market conditions and the operating levels of competing facilities.

Consistent, safe and reliable operations are critical to the financial performance and results of operations of CVR Partners. In addition, operations at the Linde air separation unit, which supplies oxygen, nitrogen and compressed dry air to the CVR Partners’ nitrogen fertilizer manufacturing facility located in Coffeyville, Kansas (“Coffeyville Fertilizer Facility”), is critical to CVR Partners’ financial performance and results of operations. Downtime at either of the facilities of CVR Partners or at the Linde facility may result in lost margin opportunity, increased maintenance expense and a temporary increase in working capital investment and related inventory position. Production levels in the first quarter of 2018 were negatively impacted by 12 days of unplanned downtime due to a boiler feed water coil leak at the CVR Partners’ nitrogen fertilizer manufacturing facility located in East Dubuque, Illinois (“East Dubuque Facility”). The Linde air separation unit experienced a shut down during the second quarter of 2017. Following the Linde outage, the Coffeyville Fertilizer Facility UAN unit experienced a number of operational challenges, resulting in approximately 11 days of UAN downtime during the three months ended June 30, 2017.

Historically, the nitrogen fertilizer business facilities have each undergone a full facility turnaround approximately every two to three years. The Coffeyville Fertilizer Facility underwent a full facility turnaround in the second quarter of 2018, and the East Dubuque Facility underwent a full facility turnaround during the third quarter of 2017.

The largest raw material expense used in the production of ammonia at the East Dubuque Facility is natural gas, which is purchased from third parties. Pet coke, a coal-like substance that is produced during the refining process, is required to operate the Coffeyville Fertilizer Facility. The majority of pet coke is purchased from CVR Refining, typically at a discount when compared to pet coke purchased from third parties. The price and availability of natural gas and pet coke can significantly impact the profitability of CVR Partners.

## Non-GAAP Measures

Our management uses certain non-GAAP performance measures to evaluate past performance and prospects for the future to supplement our GAAP financial information presented in accordance with U.S. GAAP. These non-GAAP financial measures are important factors in assessing our operating results and profitability and include performance and liquidity measures along with certain key operating metrics.

### *Performance and Liquidity Measures*

We use the following performance and liquidity measures:

*EBITDA and Adjusted EBITDA.* EBITDA represents net income attributable to CVR Energy stockholders before consolidated (i) interest expense and other financing costs, net of interest income; (ii) income tax expense (benefit); and (iii) depreciation and amortization, less the portion of these adjustments attributable to noncontrolling interest. Adjusted EBITDA represents EBITDA adjusted for consolidated (i) FIFO impact (favorable) unfavorable; (ii) major turnaround expenses (that many of our competitors capitalize and thereby exclude from their measures of EBITDA and adjusted EBITDA); (iii) (gain) loss on derivatives, net; and (iv) current period settlements on derivative contracts. EBITDA and Adjusted EBITDA are not recognized terms under GAAP and should not be substituted for net income or cash flow from operations. We believe that EBITDA and Adjusted EBITDA enable investors to better understand and evaluate our ongoing operating results and allow for greater transparency in reviewing our overall financial, operational and economic performance. EBITDA and Adjusted EBITDA presented by other companies may not be comparable to our presentation, since each company may define these terms differently. EBITDA and Adjusted EBITDA represent EBITDA and Adjusted EBITDA that is attributable to CVR Energy stockholders.

*Petroleum EBITDA.* EBITDA is a performance measure representing net income before (i) interest expense and other financing costs, net of interest income, (ii) income tax expense and (iii) depreciation and amortization.

*Petroleum Adjusted EBITDA.* Adjusted EBITDA is a performance measure representing EBITDA adjusted for (i) (favorable) unfavorable FIFO impacts associated with our crude oil and refined product inventories, (ii) major turnaround expenses (that many of our competitors capitalize and thereby exclude from their measures of EBITDA and adjusted EBITDA), (iii) (gain) loss on derivatives, net and (iv) current period settlements on derivative contracts. Adjusted EBITDA represents the starting point for determining available cash for distribution. Refer to discussion below for the Refining margin, adjusted for FIFO impact non-GAAP measure for discussion of why management adjusted for the FIFO impact of our inventories. We exclude major turnaround expenses because these amounts are required expenditures for our refineries, are not closely related to current period operations, and many of our peer companies capitalize these amounts thereby excluding these amounts from their EBITDA-related measures. For derivatives, we adjust EBITDA to exclude the unrealized or non-cash portion of our derivative gain or loss from our results in order to arrive at our starting point for available cash for distribution.

*Nitrogen EBITDA.* Nitrogen Fertilizer EBITDA represents nitrogen fertilizer net loss adjusted for (i) interest (income) expense; (ii) income tax expense; and (iii) depreciation and amortization expense. Adjusted Nitrogen Fertilizer EBITDA represents Nitrogen Fertilizer EBITDA adjusted for (i) major turnaround expenses, when applicable; (ii) gain or loss on extinguishment of debt; and (iii) business interruption insurance recovery, when applicable. We present Adjusted Nitrogen Fertilizer EBITDA because we have found it helpful to consider an operating measure that excludes expenses, such as major turnaround expense, gain or loss on extinguishment of debt, loss on disposition of assets, and business interruption insurance recovery, relating to transactions not reflective of CVR Partner's core operations.

*Nitrogen Adjusted EBITDA.* We also present Adjusted Nitrogen Fertilizer EBITDA because it is the starting point for calculating CVR Partner's available cash for distribution. Adjusted Nitrogen Fertilizer EBITDA is not a recognized term under GAAP and should not be substituted for net loss as a measure of performance. We believe that Nitrogen Fertilizer EBITDA and Adjusted Nitrogen Fertilizer EBITDA enable investors and analysts to better understand CVR Partner's ability to make distributions to its common unitholders, help investors and analysts evaluate its ongoing operating results and allow for greater transparency in reviewing our overall financial, operational and economic performance by allowing investors to evaluate the same information used by management. Nitrogen Fertilizer EBITDA and Adjusted Nitrogen Fertilizer EBITDA presented by other companies may not be comparable to our presentation, since each company may define these terms differently.

*Refining margin.* This performance measure represents the difference between net sales and cost of materials and other as reported on our Condensed Consolidated Statements of Operations.

*Refining margin, adjusted for FIFO impact.* This performance measure represents our refining margin adjusted to exclude the impact of price changes in our crude oil and refined products inventories. Under our FIFO accounting method for crude oil and

refined products, changes in crude oil prices can cause fluctuations in the inventory valuation of our raw material, work in process and finished good inventories, thereby resulting in a favorable FIFO impact when crude oil prices increase and an unfavorable FIFO impact when crude oil prices decrease. In periods of significant price volatility, these price changes have a significant impact on the valuation on our inventories and thus our results.

*Available cash for distribution.* This performance and liquidity measure is equal to Adjusted EBITDA reduced for cash needed for (i) debt service, (ii) reserves for environmental and maintenance capital expenditures, (iii) reserves for major turnaround expenses and, to the extent applicable, (iv) reserves for future operating or capital needs that the board of directors of our general partner deems necessary or appropriate, if any. Available cash for distribution may be increased by the release of previously established cash reserves, if any, and other excess cash, at the discretion of the board of directors of our general partner.

### ***Operating Metrics***

During the second quarter of 2018, we changed the metrics discussed below from a crude oil throughput barrel basis to a total throughput barrel basis. Prior period information has been revised to conform to current presentation.

*Refining margin and refining margin adjusted for FIFO impact per total throughput barrel.* For both refining margin and refining margin adjusted for FIFO impact, we present these measures on a per total throughput barrel basis. In order to calculate these non-GAAP operating metrics, we utilize the total dollar figures for refining margin and refining margin adjusted for FIFO impact, as derived above and divide by the applicable number of total throughput barrels for the period.

*Direct operating expenses, excluding major turnaround expenses, per total throughput barrel.* We provide this performance measure to exclude major turnaround expenses from the reported amounts of direct operating expense during a given period. Major turnaround expenses are not directly correlated to our current period operations and thus excluding them provides investors and analysts with the current period cost, exclusive of depreciation and amortization, we incur to convert a barrel of crude oil into refined product.

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 industry, 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.

**Results of Operations**

(in millions, except per share data)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
<b>Consolidated Statements of Operations Data</b>				
Net sales	\$ 1,935	\$ 1,454	\$ 5,386	\$ 4,395
Cost of materials and other	1,561	1,133	4,370	3,582
Direct operating expenses (1)	121	160	394	422
Depreciation and amortization	49	51	151	152
Cost of sales	1,731	1,344	4,915	4,156
Selling, general and administrative expenses (1)	28	27	83	82
Depreciation and amortization	2	3	8	7
Loss on asset disposals	—	1	5	2
Operating income	174	79	375	148
Interest expense, net	(26)	(28)	(79)	(81)
Gain (loss) on derivatives, net	5	(17)	75	(5)
Other income, net	3	—	6	—
Income before income tax expense	156	34	377	62
Income tax expense	35	9	73	18
Net income	121	25	304	44
Less: Net income attributable to noncontrolling interest	31	3	97	10
Net income attributable to CVR Energy stockholders	\$ 90	\$ 22	\$ 207	\$ 34
Basic and diluted earnings per share	\$ 0.94	\$ 0.26	\$ 2.31	\$ 0.39
Dividends declared per share	\$ 0.75	\$ 0.50	\$ 2.00	\$ 1.50
Adjusted EBITDA (2)	\$ 172	\$ 91	\$ 361	\$ 209
Weighted-average common shares outstanding:				
Basic and diluted	95.8	86.8	89.8	86.8

(1) Amounts are shown exclusive of depreciation and amortization.

(2) See “Non-GAAP Reconciliations” section below for further information regarding this non-GAAP measure.

## Consolidated Results of Operations

### *Three Months Ended September 30, 2018 Compared to the Three Months Ended September 30, 2017 (Consolidated)*

**Net Sales.** Consolidated net sales were \$1,935 million for the three months ended September 30, 2018 compared to \$1,454 million for the three months ended September 30, 2017. The increase in sales of \$481 million was largely the result of an increase in the petroleum segment's net sales of \$471 million due to increased refined product sales volumes, partially offset by decreased refined products crack spreads. The petroleum segment's overall sales volumes increased approximately 3.5% for the three months ended September 30, 2018, as compared to the three months ended September 30, 2017 primarily due to an inventory build in preparation for a fall turnaround at our Wynnewood refinery in the prior period. The nitrogen fertilizer segment's net sales increased by approximately \$11 million primarily as a result of increased UAN sales prices. The increase in UAN sales prices was primarily attributable to favorable market conditions.

**Cost of Materials and Other.** Consolidated cost of materials and other was \$1,561 million for the three months ended September 30, 2018, as compared to \$1,133 million for the three months ended September 30, 2017. The increase of \$428 million was related to an increase of \$430 million at the petroleum segment, partially offset by a 1 million decrease at the nitrogen fertilizer segment. The petroleum business' consumed crude oil costs increased due to an increase in crude oil prices, coupled with a slight increase in throughput volumes of crude oil. The West Texas Intermediate ("WTI") benchmark crude price increased approximately 44.0% and the petroleum business' crude oil throughput volume increased by approximately 2.9% for the three months ended September 30, 2018 as compared to the three months ended September 30, 2017. The nitrogen fertilizer segment's cost of material and other was consistent at \$19 million and \$20 million for the three months ended September 30, 2018 and September 30, 2017, respectively.

**Gain (loss) on derivatives, net.** For the three months ended September 30, 2018, the petroleum segment recorded a \$5 million net gain on derivatives, as compared to a net loss of \$17 million for the three months ended September 30, 2017. This change was primarily due to a decrease in the volume of open derivative positions from 16 million barrels as of September 30, 2017 to 2 million barrels as of September 30, 2018. Additionally, the market fluctuations associated with our derivative positions can materially impact our gain or loss on derivatives.

**Income tax expense.** Income tax expense for the three months ended September 30, 2018 was \$35 million, or 22.4% of income (loss) before income taxes, as compared to income tax expense for the three months ended September 30, 2017 of \$9 million, or 26.5% of income (loss) before income taxes. The fluctuation in income tax expense was due primarily to the change in pretax income (loss) from the three months ended September 30, 2017 to the three months ended September 30, 2018. In addition, the change in the effective tax rate was largely due to the change in the federal statutory tax rate from 35% in 2017 to 21% in 2018.

***Nine Months Ended September 30, 2018 Compared to the Nine Months Ended September 30, 2017 (Consolidated)***

**Net Sales.** Consolidated net sales were \$5,386 million for the nine months ended September 30, 2018 compared to \$4,395 million for the nine months ended September 30, 2017. The increase of \$991 million was largely the result of an increase in the petroleum segment's net sales of \$991 million due to increased refined products crack spreads, partially offset by decreased sales volumes. The NYMEX 2-1-1 crack spread and Group 3 2-1-1 crack spread increased by \$2.15 and \$2.51 per barrel, respectively, compared to the same period last year driven largely by an improved distillate crack. Overall sales volumes decreased approximately 4.8% for the nine months ended September 30, 2018, as compared to the nine months ended September 30, 2017, primarily due to decreased production as a result of the fluid catalytic cracking unit ("FCCU") outage at the Coffeyville refinery during the first quarter of 2018, offset by improved sales volume in the third quarter of 2018 as volume reduced in 2017 in preparation of the Wynnewood turnaround. The nitrogen fertilizer segment's net sales remained consistent over the period, with net sales of \$253 million for the nine months ended September 30, 2018 and 2017. Nitrogen fertilizer net sales was impacted by an increase in UAN and ammonia sales prices for the nine months ended September 30, 2018 compared to the nine months ended September 30, 2017, which was primarily attributable to more favorable market conditions during the current period. This was offset by a decrease in UAN sales volumes due to lower production resulting from planned and unplanned downtime during the nine months ended September 30, 2018, coupled with a decrease in ammonia sales volumes resulting from less product available from lower inventory as of December 31, 2017.

**Cost of Materials and Other.** Consolidated cost of materials and other was \$4,370 million for the nine months ended September 30, 2018, as compared to \$3,582 million for the nine months ended September 30, 2017. The increase of \$788 million primarily resulted from an increase of \$791 million in the petroleum segment. The increase at the petroleum segment was primarily the result of increases in the cost of consumed crude oil, partially offset by a decrease in RINs costs. The increase in consumed crude oil costs was due to an increase in crude oil prices, partially offset by a decrease in crude oil throughput volume. The WTI benchmark crude price increased approximately 35.3% and crude oil throughput volume decreased by approximately 6.1% for the nine months ended September 30, 2018 as compared to the nine months ended September 30, 2017. The net cost of RINs was favorably impacted by a reduction in the petroleum segment's RFS obligation and reduced market pricing. The nitrogen fertilizer segment's cost of materials and other decreased by approximately \$2 million primarily due to an overall decrease from lower sales volumes as well as a \$1 million decrease in distribution costs to off-site inventory locations.

**Gain (loss) on derivatives, net.** For the nine months ended September 30, 2018, the petroleum segment recorded a \$75 million net gain on derivatives. This compares to a \$5 million net loss on derivatives for the nine months ended September 30, 2017. This change was primarily due to a decrease in the volume of open derivative positions from 16 million barrels as of September 30, 2017 to 2 million barrels as of September 30, 2018. Additionally, the market fluctuations associated with our derivative positions can materially impact our gain or loss on derivatives.

**Income Tax Expense.** Income tax expense for the nine months ended September 30, 2018 was \$73 million, or 19.4% of income (loss) before income taxes, as compared to income tax expense for the nine months ended September 30, 2017 of \$18 million, or 29.0% of income (loss) before income taxes. The fluctuation in income tax expense was due primarily to the change in pretax income from the nine months ended September 30, 2017 to the nine months ended September 30, 2018. In addition, the change in the effective tax rate was largely due to the change in the federal statutory tax rate from 35% in 2017 to 21% in 2018.

**Petroleum Business Results of Operations**

The petroleum business includes the operations of both the Coffeyville and Wynnewood refineries. The following tables provide an overview of the petroleum business' results of operations, relevant market indicators and its key operating statistics for the three and nine months ended September 30, 2018 and 2017:

(In millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
<b>Petroleum Segment Summary Financial Results</b>				
Net sales	\$ 1,857	\$ 1,386	\$ 5,139	\$ 4,148
Operating costs and expenses:				
Cost of materials and other	1,544	1,114	4,315	3,524
Direct operating expenses (1)	85	120	272	308
Depreciation and amortization	33	32	98	97
Cost of sales	1,662	1,266	4,685	3,929
Selling, general and administrative expenses (1)	18	19	56	58
Depreciation and amortization	1	1	3	3
Loss on asset disposals	—	1	5	1
Operating income	176	99	390	157
Interest expense, net	(10)	(12)	(32)	(34)
Loss on derivatives, net	5	(17)	75	(5)
Other income, net	3	—	6	—
Net income	\$ 174	\$ 70	\$ 439	\$ 118
Gross profit	\$ 195	\$ 120	\$ 454	\$ 219
Refining margin (2)	313	272	824	624
Adjusted Petroleum EBITDA (2)	221	139	494	296

(In dollars per total throughput barrel)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
<b>Key Operating Statistics</b>				
Gross profit	\$ 9.70	\$ 6.07	\$ 7.99	\$ 3.61
Refining margin (2)	15.54	13.81	14.50	10.32
FIFO impact, unfavorable	(0.13)	(0.76)	(0.79)	0.01
Refining margin adjusted for FIFO impact (2)	15.41	13.05	13.71	10.33
Direct operating expenses (1)	4.23	6.12	4.79	5.11
Direct operating expenses excluding major turnaround expenses (1)(2)	4.17	5.02	4.77	4.49

(1) Amounts are shown exclusive of depreciation and amortization.

(2) See "Non-GAAP Reconciliations" section below for further information regarding these non-GAAP measures.

(In dollars per barrel)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
<b>Market Indicators</b>				
West Texas Intermediate (WTI) NYMEX	\$ 69.43	\$ 48.20	\$ 66.79	\$ 49.36
Crude Oil Differentials:				
WTI less WTS (light/medium sour)	14.26	0.97	8.14	1.15
WTI less WCS (heavy sour)	27.76	10.48	23.77	11.42
WTI less Condensate	0.37	0.12	0.40	0.12
Midland Cushing Differential	14.33	0.79	7.69	0.54
NYMEX Crack Spreads:				
Gasoline	16.96	20.42	17.69	17.74
Heating Oil	22.03	21.05	21.59	17.24
NYMEX 2-1-1 Crack Spread	19.50	20.73	19.64	17.49
PADD II Group 3 Basis:				
Gasoline	(0.13)	(1.18)	(2.16)	(2.37)
Ultra Low Sulfur Diesel	0.89	0.85	0.08	(0.44)
PADD II Group 3 Product Crack Spread:				
Gasoline	16.83	19.23	15.53	15.37
Ultra Low Sulfur Diesel	22.92	21.90	21.67	16.80
PADD II Group 3 2-1-1	\$ 19.88	\$ 20.57	\$ 18.60	\$ 16.09

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2018		2017		2018		2017	
		%		%		%		%
<b>Total Refining Throughput and Production Data (bpd)</b>								
Throughput:								
Condensate	8,425	3.8	1	—	13,156	6.3	2,893	1.3
Sweet	193,727	88.5	196,341	91.9	179,964	86.5	195,857	88.5
Heavy sour	6,746	3.1	6,751	3.2	4,518	2.2	11,643	5.3
Total crude oil throughput	208,898	95.4	203,093	95.1	197,638	95.0	210,393	95.1
All other feedstocks and blendstocks	10,008	4.6	10,513	4.9	10,454	5.0	10,943	4.9
Total throughput	218,906	100.0	213,606	100.0	208,092	100.0	221,336	100.0
Production:								
Gasoline	111,087	50.8	105,712	49.5	103,258	49.6	112,268	50.6
Distillate	94,157	43.0	89,655	42.0	89,325	42.9	92,046	41.5
Other (excluding internally produced fuel)	13,497	6.2	18,107	8.5	15,486	7.5	17,385	7.9
Total refining production (excluding internally produced fuel)	218,741	100.0	213,474	100.0	208,069	100.0	221,699	100.0

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2018		2017		2018		2017	
		%		%		%		%
<b>Coffeyville Refinery Throughput and Production Data (bpd)</b>								
Throughput:								
Condensate	273	0.2	1	—	6,448	5.1	2,893	2.1
Sweet	127,792	90.3	121,709	89.6	109,937	86.4	116,468	83.7
Heavy sour	6,746	4.8	6,751	5.0	4,518	3.6	11,643	8.4
Total crude oil throughput	134,811	95.3	128,461	94.6	120,903	95.1	131,004	94.2
All other feedstocks and blendstocks	6,664	4.7	7,415	5.4	6,238	4.9	8,124	5.8
Total throughput	141,475	100.0	135,876	100.0	127,141	100.0	139,128	100.0
Production:								
Gasoline	72,337	50.7	67,598	49.1	62,543	48.7	70,697	50.1
Distillate	60,521	42.4	57,654	41.9	54,914	42.7	58,927	41.7
Other (excluding internally produced fuel)	9,900	6.9	12,355	9.0	11,066	8.6	11,619	8.2
Total refining production (excluding internally produced fuel)	142,758	100.0	137,607	100.0	128,523	100.0	141,243	100.0

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2018		2017		2018		2017	
		%		%		%		%
<b>Wynnewood Refinery Throughput and Production Data (bpd)</b>								
Throughput:								
Condensate	8,152	10.5	—	—	6,708	8.3	—	—
Sweet	65,936	85.2	74,632	96.0	70,026	86.5	79,389	96.6
Total crude oil throughput	74,088	95.7	74,632	96.0	76,734	94.8	79,389	96.6
All other feedstocks and blendstocks	3,344	4.3	3,098	4.0	4,216	5.2	2,819	3.4
Total throughput	77,432	100.0	77,730	100.0	80,950	100.0	82,208	100.0
Production:								
Gasoline	38,750	51.0	38,114	50.2	40,715	51.2	41,571	51.6
Distillate	33,636	44.3	32,001	42.2	34,411	43.2	33,119	41.2
Other (excluding internally produced fuel)	3,597	4.7	5,752	7.6	4,420	5.6	5,766	7.2
Total refining production (excluding internally produced fuel)	75,983	100.0	75,867	100.0	79,546	100.0	80,456	100.0

***Three Months Ended September 30, 2018 Compared to the Three Months Ended September 30, 2017 (Petroleum Business)***

**Refining Margin.** For the petroleum refining business three months ended September 30, 2018 compared to the three months ended September 30, 2017, the NYMEX 2-1-1 crack spread declined by \$1.23 per barrel, led by a decrease in gasoline and offset by an increase in distillate. The Group 3 2-1-1, while also declining by \$0.69 per barrel, strengthened when compared to the NYMEX national benchmark due to the region's gasoline price falling by \$1.06 per barrel less than NYMEX gasoline. The crude oil that the petroleum refineries acquire and process had widened discounts versus WTI for the three months ended September 30, 2018 compared to the three months ended September 30, 2017. WCS and Midland crude supply availability and take-away constraints widened the discounts to WTI by \$17.28 and \$13.54 per barrel, respectively. In addition, the weighted average price of RINs declined by \$0.64 for the three months ended September 30, 2018 compared to the three months ended September 30, 2017.

For the three months ended September 30, 2018 the petroleum refining margin was \$313 million or \$15.54 per throughput barrel, as compared to \$272 million or \$13.81 per throughput barrel for the three months ended September 30, 2017 primarily due to reduced RIN expense and increased refined product sales volumes, partially offset by decreased refined product crack spreads. Overall sales volumes increased approximately 3.5% for the three months ended September 30, 2018, as compared to the three months ended September 30, 2017 primarily due to an inventory build in preparation for a fall turnaround at our Wynnewood refinery in the prior period.

**Direct Operating Expenses (Exclusive of Depreciation and Amortization).** Direct operating expenses (exclusive of depreciation and amortization) were \$85 million for the three months ended September 30, 2018 compared to \$120 million for the three months ended September 30, 2017. The decrease of approximately \$35 million was primarily due to a decrease in major scheduled turnaround expenses, as our Wynnewood refinery went into major scheduled turnaround in late September 30, 2017.

**Gain (loss) on derivatives, net.** For the three months ended September 30, 2018, the petroleum business recorded a \$5 million net gain on derivatives, as compared to a \$17 million net loss on derivatives for the three months ended September 30, 2017. This change was primarily due to a decrease in the volume of open derivative positions from 16 million barrels as of September 30, 2017 to 2 million barrels as of September 30, 2018. Additionally, the market fluctuations associated with our derivative positions can materially impact our gain or loss on derivatives.

***Nine Months Ended September 30, 2018 Compared to the Nine Months Ended September 30, 2017 (Petroleum Business)***

**Refining Margin.** For the petroleum refining business nine months ended September 30, 2018 compared to the nine months ended September 30, 2017, the NYMEX 2-1-1 crack spread increased by \$2.15 per barrel, primarily due to an improved distillate crack. The Group 3 2-1-1 also improved in 2018 by \$2.51 compared to the same period last year, again driven largely by the distillate crack. The crude oil that our petroleum refineries acquire and process had widened discounts versus WTI for the nine months ended September 30, 2018 compared to the nine months ended September 30, 2017. WCS and Midland crude supply availability and take-away constraints widened the discounts to WTI by \$12.35 and \$7.15 per barrel, respectively. In addition, the weighted average price of RINs declined by \$0.33 for the nine months ended September 30, 2018 compared to the nine months ended September 30, 2017.

For the nine months ended September 30, 2018 the petroleum refining margin was \$824 million or \$14.50 per throughput barrel, as compared to \$624 million, or \$10.32 per throughput barrel for the nine months ended September 30, 2017 primarily due to increased refined product crack spreads and reduced RIN expense, offset by reduced sales volumes. Overall sales volumes decreased approximately 4.8% for the nine months ended September 30, 2018, as compared to the nine months ended September 30, 2017, primarily due to decreased production as a result of the FCCU outage at the Coffeyville refinery during the first quarter of 2018, offset by improved sales volume in the third quarter of 2018 as volume reduced in 2017 in preparation of the Wynnewood turnaround.

**Direct Operating Expenses (Exclusive of Depreciation and Amortization).** Direct operating expenses (exclusive of depreciation and amortization) were \$272 million for the nine months ended September 30, 2018 compared to \$308 million for the nine months ended September 30, 2017. The decrease of approximately \$36 million was primarily due to a decrease in major scheduled turnaround expenses, as our Wynnewood refinery went into major scheduled turnaround in late September in 2017.

**Gain (loss) on derivatives, net.** For the nine months ended September 30, 2018, we recorded a \$75 million net gain on derivatives, as compared to a \$5 million net loss on derivatives for the nine months ended September 30, 2017. This change was primarily due to a decrease in the volume of open derivative positions from 16 million barrels as of September 30, 2017 to 2 million barrels as of September 30, 2018. Additionally, the market fluctuations associated with our derivative positions can materially impact our gain or loss on derivatives.

### Nitrogen Fertilizer Business Results of Operations

The tables below provide an overview of the nitrogen fertilizer business' results of operations, relevant market indicators and key operating statistics for the three and nine months ended September 30, 2018 and 2017.

(In millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
<b>Nitrogen Fertilizer Business Financial Results</b>				
Net sales	\$ 80	\$ 69	\$ 253	\$ 253
Cost of materials and other	19	20	61	63
Direct operating expenses (1)	35	40	121	114
Depreciation and amortization	16	20	53	55
Cost of sales	70	80	235	232
Selling, general and administrative (1)	7	5	19	19
Operating income (loss)	3	(16)	(1)	2
Interest expense, net	(16)	(16)	(47)	(47)
Net loss	\$ (13)	\$ (32)	\$ (48)	\$ (45)
Adjusted Nitrogen Fertilizer EBITDA (2)	\$ 19	\$ 5	\$ 58	\$ 58

(1) Amounts are shown exclusive of depreciation and amortization.

(2) See "Non-GAAP Reconciliations" section below for further information regarding this non-GAAP measure.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
<b>Nitrogen Fertilizer Segment Key Operating Statistics:</b>				
Sales (thousand tons):				
Ammonia	38	65	156	202
UAN	310	299	925	952
Product pricing at gate (dollars per ton) (1):				
Ammonia	\$ 297	\$ 214	\$ 329	\$ 287
UAN	\$ 170	\$ 138	\$ 169	\$ 158
Production volume (thousand tons):				
Ammonia (gross produced) (2)	212	181	584	615
Ammonia (net available for sale) (2)	63	46	187	204
UAN	338	307	919	962
Feedstock:				
Petroleum coke used in production (thousand tons)	117	114	325	371
Petroleum coke used in production (dollars per ton)	\$ 26	\$ 18	\$ 23	\$ 18
Natural gas used in production (thousands of MMBtu) (3)(4)	2,118	1,555	5,933	5,781
Natural gas used in production (dollars per MMBtu) (3)(4)	\$ 3.03	\$ 3.12	\$ 3.01	\$ 3.25
Natural gas in cost of materials and other (thousands of MMBtu) (3)	1,439	1,935	5,268	5,898
Natural gas in cost of materials and other (dollars per MMBtu) (3)	\$ 2.98	\$ 3.15	\$ 3.03	\$ 3.30
Coffeyville Fertilizer Facility on-stream factors (4):				
Gasification	100%	96%	91%	98%
Ammonia	100%	94%	90%	97%
UAN	97%	94%	88%	93%
East Dubuque Facility on-stream factors (4):				
Ammonia	99%	76%	93%	92%
UAN	98%	77%	93%	92%
<b>Market Indicators:</b>				
Ammonia — Southern Plains (dollars per ton)	\$ 337	\$ 238	\$ 354	\$ 314
Ammonia — Corn belt (dollars per ton)	\$ 398	\$ 303	\$ 407	\$ 364
UAN — Corn belt (dollars per ton)	\$ 203	\$ 165	\$ 208	\$ 192
Natural gas NYMEX (dollars per MMBtu)	\$ 2.87	\$ 2.95	\$ 2.85	\$ 3.05

(1) Product pricing at gate, also referred to as netback, represents net sales less freight revenue divided by product sales volume in tons and is shown in order to provide a pricing measure that is comparable across the fertilizer industry.

(2) 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.

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

(4) On-stream factor is the total number of hours operated divided by the total number of hours in the reporting period and is included as a measure of operating efficiency.

**Three Months Ended September 30, 2018 Compared to the Three Months Ended September 30, 2017 (Nitrogen Fertilizer Business)**

**Net Sales.** Nitrogen fertilizer business net sales were \$80 million for the three months ended September 30, 2018 compared to \$69 million for the three months ended September 30, 2017. For the three months ended September 30, 2018, UAN and ammonia made up \$61 million and \$12 million of CVR Partners' consolidated net sales, respectively, including freight. For the three months ended September 30, 2017, UAN and ammonia made up \$49 million and \$15 million of CVR Partners' consolidated net sales, respectively, including freight.

The following table demonstrates the impact of changes in sales volumes and pricing for the primary components of net sales for the three months ended September 30, 2018 as compared to the three months ended September 30, 2017:

	<u>Price Variance</u>	<u>Volume Variance</u>
(in millions)		
UAN	\$ 10	\$ 2
Ammonia	\$ 3	\$ (6)

The increase in UAN sales prices for the three months ended September 30, 2018 as compared to the three months ended September 30, 2017 was primarily attributable to favorable market conditions. The decrease in ammonia sales volumes for the three months ended September 30, 2018 as compared to the three months ended September 30, 2017 was primarily attributable to less inventory available for sale at the beginning of the third quarter of 2018 as compared to the same quarter in the prior year. There was more inventory available for sale at the beginning of the third quarter in 2017 due to relatively bad weather conditions in addition to an outage at the manufacturing facility in Coffeyville, Kansas, both of these factors led to a lower application of ammonia in 2017 and resulted in higher inventory available for sale at the start of the third quarter in 2017.

**Cost of Materials and Other.** Nitrogen fertilizer business cost of materials and other was consistent at \$19 million and \$20 million for the three months ended September 30, 2018 and September 30, 2017, respectively.

**Direct Operating Expenses (Exclusive of Depreciation and Amortization).** Nitrogen fertilizer business direct operating expenses (exclusive of depreciation and amortization) for the three months ended September 30, 2018 were \$35 million as compared to \$40 million for the three months ended September 30, 2017. The \$4 million decrease was primarily due to the third quarter 2017 turnaround at the East Dubuque Facility, which resulted in turnaround expenses of \$3 million, coupled with decreases in repairs and maintenance costs and personnel costs as a result of turnaround activities.

**Nine Months Ended September 30, 2018 Compared to the Nine Months Ended September 30, 2017 (Nitrogen Fertilizer Business)**

**Net Sales.** Nitrogen fertilizer business net sales were \$253 million for the nine months ended September 30, 2018 compared to \$253 million for the nine months ended September 30, 2017. For the nine months ended September 30, 2018, UAN and ammonia made up \$179 million and \$54 million of CVR Partner's consolidated net sales, respectively, including freight. For the nine months ended September 30, 2017, UAN and ammonia made up \$172 million and \$60 million of CVR Partner's consolidated net sales, respectively, including freight.

The following table demonstrates the impact of changes in sales volumes and pricing for the primary components of net sales for the nine months ended September 30, 2018 as compared to the nine months ended September 30, 2017:

	<u>Price Variance</u>	<u>Volume Variance</u>
(in millions)		
UAN	\$ 12	\$ (5)
Ammonia	\$ 7	\$ (14)

[Table of Contents](#)

The decrease in UAN sales volumes for the nine months ended September 30, 2018 compared to the nine months ended September 30, 2017 was primarily attributable to lower production resulting from planned and unplanned downtime during the nine months ended September 30, 2018. The decrease in ammonia sales volumes for the nine months ended September 30, 2018 compared to the nine months ended September 30, 2017 was also attributable to less product available from lower inventory as of December 31, 2017 due to a strong Fall 2017 application as compared to December 31, 2016 and downtime for the nine months ended September 30, 2018. The increase in UAN and ammonia sales prices for the nine months ended September 30, 2018 compared to the nine months ended September 30, 2017 was primarily attributable to more favorable market conditions in the current quarter.

**Cost of Materials and Other.** Nitrogen fertilizer business cost of materials and other for the nine months ended September 30, 2018 was \$61 million, compared to \$63 million for the nine months ended September 30, 2017. The \$2 million decrease was primarily due to an overall decrease in costs from lower sales volumes as well as a \$1 million decrease in distribution costs to off-site inventory locations.

**Direct Operating Expenses (Exclusive of Depreciation and Amortization).** Direct operating expenses (exclusive of depreciation and amortization) for the nine months ended September 30, 2018 were \$121 million as compared to \$114 million for the nine months ended September 30, 2017. The \$7 million increase was primarily due to an increase in turnaround expenses of \$4 million, higher personnel costs of \$2 million attributable to higher workloads along with inventory overhead allocations during downtime, higher repair and maintenance costs of \$2 million resulting from outages during the 2018 period and \$1 million in business interruption recovery during the 2017 period. These increases were offset by lower utility costs of \$2 million primarily associated with the 2018 downtime and lower natural gas prices.

**Non-GAAP Reconciliations**

**Reconciliation of Net Income attributable to CVR Energy stockholders to EBITDA and Adjusted EBITDA**

(In millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Net income attributable to CVR Energy stockholders	\$ 90	\$ 22	\$ 207	\$ 34
Add:				
Interest expense, net	26	28	79	81
Income tax expense	35	9	73	18
Depreciation and amortization	51	54	159	159
Adjustments attributable to noncontrolling interest	(31)	(38)	(107)	(113)
EBITDA	171	75	411	179
Add:				
FIFO impact, (favorable) unfavorable (a)	(3)	(15)	(45)	1
Major turnaround expenses (b)	1	24	7	39
Gain on derivatives, net	(5)	17	(75)	5
Current period settlement on derivative contracts (c)	10	—	41	1
Insurance recovery - business interruption	—	(1)	—	(1)
Adjustments attributable to noncontrolling interest	(2)	(9)	22	(15)
Adjusted EBITDA	\$ 172	\$ 91	\$ 361	\$ 209

[Table of Contents](#)

Below is a reconciliation of net income (loss) for the petroleum segment to Petroleum EBITDA and Petroleum EBITDA to Adjusted Petroleum EBITDA for the three and nine months ended September 30, 2018 and 2017:

(In millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
<b>Petroleum:</b>				
Petroleum net income	\$ 174	\$ 70	\$ 439	\$ 118
Add:				
Interest expense, net	10	12	32	34
Depreciation and amortization	34	33	101	100
Petroleum EBITDA	218	115	572	252
Add:				
FIFO impact, (favorable) unfavorable	(3)	(15)	(45)	1
Major turnaround expenses (b)	1	22	1	37
(Gain) loss on derivatives, net	(5)	17	(75)	5
Current period settlements on derivative contracts (c)	10	—	41	1
Adjusted Petroleum EBITDA	\$ 221	\$ 139	\$ 494	\$ 296

- (a) FIFO is the petroleum business' basis for determining inventory value under GAAP. 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 FIFO impact when crude oil prices increase and an unfavorable FIFO impact when crude oil prices decrease. The FIFO 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 FIFO impact per total throughput barrel, we utilize the total dollar figures for the FIFO impact and divide by the number of total throughput barrels for the period.
- (b) Represents expense associated with major turnaround activities at the Wynnewood refinery during 2017.
- (c) Represents the portion of gain on derivatives, net related to contracts that matured during the respective periods and settled with counterparties. There are no premiums paid or received at the inception of the derivative contracts. Upon settlement there is no cost recovery associated with these contracts.

***Reconciliation of gross profit to Refining Margin, Refining Margin adjusted for FIFO Impact (in millions and on per total throughput barrel basis) and Direct operating expenses, excluding major turnaround expenses, per total throughput barrel.***

(In millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Net sales	\$ 1,857	\$ 1,386	\$ 5,139	\$ 4,148
Cost of materials and other	1,544	1,114	4,315	3,524
Direct operating expenses (exclusive of depreciation and amortization as reflected below)	85	120	272	308
Depreciation and amortization	33	32	98	97
Gross profit	195	120	454	219
Add:				
Direct operating expenses (exclusive of depreciation and amortization as reflected below)	85	120	272	308
Depreciation and amortization	33	32	98	97
Refining margin	313	272	824	624
FIFO impact, (favorable) unfavorable	(3)	(15)	(45)	1
Refining margin adjusted for FIFO impact	\$ 310	\$ 257	\$ 779	\$ 625

	<b>Three Months Ended September 30,</b>		<b>Nine Months Ended September 30,</b>	
	<b>2018</b>	<b>2017</b>	<b>2018</b>	<b>2017</b>
Total throughput barrels per day	218,906	213,606	208,092	221,336
Days in the period	92	92	273	273
Total throughput barrels	<u>20,139,352</u>	<u>19,651,752</u>	<u>56,809,116</u>	<u>60,424,728</u>

	<b>Three Months Ended September 30,</b>		<b>Nine Months Ended September 30,</b>	
	<b>2018</b>	<b>2017</b>	<b>2018</b>	<b>2017</b>
(In millions, except for per throughput barrel data)				
Refining margin	\$ 313	\$ 272	\$ 824	\$ 624
Divided by: total throughput barrels	20	20	57	60
Refining margin per total throughput barrel	<u>\$ 15.54</u>	<u>\$ 13.81</u>	<u>\$ 14.50</u>	<u>\$ 10.32</u>

	<b>Three Months Ended September 30,</b>		<b>Nine Months Ended September 30,</b>	
	<b>2018</b>	<b>2017</b>	<b>2018</b>	<b>2017</b>
(In millions, except for per throughput barrel data)				
Refining margin adjusted for FIFO impact	\$ 310	\$ 257	\$ 779	\$ 625
Divided by: total throughput barrels	20	20	57	60
Refining margin adjusted for FIFO impact per total throughput barrel	<u>\$ 15.41</u>	<u>\$ 13.05</u>	<u>\$ 13.71</u>	<u>\$ 10.33</u>

(in millions, except for per throughput barrel data)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Direct operating expenses (exclusive of depreciation and amortization)	\$ 85	\$ 120	\$ 272	\$ 308
Major turnaround expenses	1	22	1	37
Direct operating expenses (1)	84	98	271	271
Divided by: total throughput barrels	20	20	57	60
Direct operating expenses, excluding major turnaround expenses, per total throughput barrel	\$ 4.17	\$ 5.02	\$ 4.77	\$ 4.49

(1) Direct operating expenses are shown exclusive of depreciation and amortization and major turnaround expenses.

Below is a reconciliation of net income for the nitrogen fertilizer segment to Nitrogen Fertilizer EBITDA and Adjusted Nitrogen Fertilizer EBITDA for the three and nine months ended September 30, 2018 and 2017:

(In millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
<b>Nitrogen Fertilizer:</b>				
Nitrogen fertilizer net loss	\$ (13)	\$ (32)	\$ (48)	\$ (45)
Add:				
Interest expense, net	16	16	47	47
Depreciation and amortization	16	20	53	55
Nitrogen Fertilizer EBITDA and Adjusted EBITDA	19	4	52	57
Add:				
Major turnaround expenses	—	2	6	2
Less:				
Insurance recovery - business interruption	—	(1)	—	(1)
Adjusted Nitrogen Fertilizer EBITDA	\$ 19	\$ 5	\$ 58	\$ 58

## Liquidity and Capital Resources

Although results are consolidated for financial reporting, CVR Energy, CVR Refining and CVR Partners are independent business entities and operate with independent capital structures. Since the CVR Partners, initial public offering in April 2011 and CVR Refining's initial public offering in January 2013, with the exception of cash distributions paid to us by CVR Partners and CVR Refining, the cash needs of CVR Partners and CVR Refining have been met independently from the cash needs of CVR Energy and each other with a combination of existing cash and cash equivalent balances, cash generated from operating activities and credit facility borrowings. CVR Refining's and CVR Partners' ability to generate sufficient cash flows from their respective operating activities and to then make distributions on their common units, including to us (which we will need to pay salaries, reporting expenses and other expenses as well as dividends on our common stock) will continue to be primarily dependent on producing or purchasing, and selling, sufficient quantities of refined and nitrogen fertilizer products at margins sufficient to cover fixed and variable expenses.

We believe that the petroleum business and the nitrogen fertilizer business' cash flows from operations and existing cash and cash equivalents, along with borrowings under their respective existing credit facilities, as necessary, will be sufficient to satisfy the anticipated cash requirements associated with their existing operations for at least the next 12 months, and that we have sufficient cash resources to fund our operations for at least the next 12 months. However, future capital expenditures and other cash requirements could be higher than we currently expect as a result of various factors. Additionally, the ability to generate sufficient cash from operating activities depends on future performance, which is subject to general economic, political, financial, competitive and other factors beyond our control.

There have been no material changes in liquidity from our 2017 Form 10-K. The Company, and its subsidiaries, were in compliance with all covenants under their respective debt instruments as of September 30, 2018, as applicable.

### Cash and Other Liquidity

As of September 30, 2018, we had cash and cash equivalents of \$702 million, \$394 million available under the CVR Refining Amended and Restated ABL Credit Facility and \$50 million available under the CVR Partners Asset Based Credit Facility. Total liquidity of \$243 million as of September 30, 2018 consists of cash residing only at CVR Energy.

CVR Refining and CVR Partners have distribution policies in which they generally distribute all of their available cash each quarter, within 60 days after the end of each quarter. The distributions are made to all common unitholders. The amount of each distribution will be determined pursuant to each general partner's calculation of available cash for the applicable quarter. The general partner of each partnership, as a non-economic interest holder, is not entitled to receive cash distributions. As a result of each general partner's distribution policy, funds held by CVR Refining and CVR Partners will not be available for our use, and we as a unitholder will receive our applicable percentage of the distribution of funds within 60 days following each quarter. CVR Refining and CVR Partners do not have a legal obligation to pay distributions and there is no guarantee that they will pay any distributions on the units in any quarter.

### Capital Spending

We divide the petroleum business and the nitrogen fertilizer business' capital spending needs into two categories: maintenance and growth. Maintenance capital spending includes only non-discretionary maintenance projects and projects required to comply with environmental, health and safety regulations. We undertake discretionary capital spending based on the expected return on incremental capital employed. Discretionary capital projects generally involve an expansion of existing capacity, improvement in product yields, and/or a reduction in direct operating expenses. Product yield is the percentage of refined products that is produced from crude oil and other feedstocks. Major turnaround expenses are expensed when incurred.

(in millions)	Nine Months Ended September 30, 2018			2018 Estimate		
	Maintenance	Growth	Total	Maintenance	Growth	Total
CVR Refining	\$ 39	\$ 11	\$ 50	\$67 - 72	\$13 - 18	\$80 - 90
CVR Partners	11	4	15	17 - 20	3 - 5	20 - 25
Other	3	—	3	0 - 5	—	0 - 5
Total	\$ 53	\$ 15	\$ 68	\$84 - 97	16 - 23	\$100 - 120

The petroleum business' and the nitrogen fertilizer business' estimated capital expenditures are subject to change due to unanticipated changes in the cost, scope and completion time for capital projects. For example, they may experience increases/decreases 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 plants. The petroleum business and nitrogen fertilizer business may also accelerate or defer some capital expenditures from time to time. Capital spending for CVR Partner's nitrogen fertilizer business and CVR Refining's petroleum business is determined by each partnership's respective board of directors of its general partner.

### Cash Flows

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

(In millions)	Nine Months Ended September 30,	
	2018	2017
Net cash provided by (used in):		
Operating activities	\$ 519	\$ 327
Investing activities	(67)	(81)
Financing activities	(232)	(133)
Net increase in cash and cash equivalents	\$ 220	\$ 113

#### *Cash Flows Provided by Operating Activities*

Net cash flows provided by operating activities for the nine months ended September 30, 2018 were approximately \$519 million. The positive cash flow from operating activities generated over this period was primarily driven by net income before noncontrolling interest of \$304 million. Upon adjustment for non-cash depreciation and amortization of \$159 million, net income was reduced by an increase of \$238 million in working capital during the first nine months of 2018.

#### *Cash Flows Used in Investing Activities*

Net cash used in investing activities for the nine months ended September 30, 2018 was \$67 million compared to \$81 million for the nine months ended September 30, 2017. Net cash used in investing activities for the nine months ended September 30, 2018 was primarily attributable to capital spending of \$68 million.

#### *Cash Flows Used In Financing Activities*

Net cash used in financing activities for the nine months ended September 30, 2018 was \$232 million, as compared to \$133 million for the nine months ended September 30, 2017. The net cash used in financing activities for the nine months ended September 30, 2018 was primarily attributable to dividend payments to common stockholders of \$162 million, distributions to CVR Refining common unitholders of \$67 million and payments of capital lease obligations of \$3 million.

As of and for the nine months ended September 30, 2018, there were no borrowings or repayments under the Amended and Restated ABL Credit Facility or the ABL Credit Facility.

### Forward-Looking Statements

This Report, including, without limitation, the section captioned “Management’s Discussion and Analysis of Financial Condition and Results of Operations”, contains “forward-looking statements” as defined by the SEC, including statements concerning contemplated transactions and strategic plans, expectations and objectives for future operations. Forward-looking statements include, without limitation:

- statements, other than statements of historical fact, that address activities, events or developments that we expect, believe or anticipate will or may occur in the future;
- statements relating to future financial or operational performance, future dividends, future capital sources and capital expenditures; and
- any other statements preceded by, followed by or that include the words “anticipates,” “believes,” “expects,” “plans,” “intends,” “estimates,” “projects,” “could,” “should,” “may” or similar expressions.

Although we believe that our plans, intentions and expectations reflected in or suggested by the forward-looking statements we make in this Report, including this Management’s Discussion and Analysis of Financial Condition and Results of Operations, are reasonable, we give no assurance that such plans, intentions or expectations will be achieved. These statements are based on assumptions made by us based on our experience and perception of historical trends, current conditions, expected future developments and other factors that we believe are appropriate in the circumstances. Such statements are subject to a number of risks and uncertainties, many of which are beyond our control. You are cautioned that any such statements are not guarantees of future performance and that actual results or developments may differ materially from those projected in the forward-looking statements as a result of various factors, including but not limited to those set forth under Part I — Item 1A. “Risk Factors” in the 2017 Form 10-K, filed with the SEC on February 26, 2018. Such factors include, among others:

- volatile margins in the refining industry and exposure to the risks associated with volatile crude oil prices;
- the availability of adequate cash and other sources of liquidity for the capital needs of our businesses;
- the ability to forecast future financial condition or results of operations and future revenues and expenses of our businesses;
- the effects of transactions involving forward and derivative instruments;
- disruption of the petroleum business' ability to obtain an adequate supply of crude oil;
- changes in laws, regulations and policies with respect to the export of crude oil or other hydrocarbons;
- interruption of the pipelines supplying feedstock and in the distribution of the petroleum business' products;
- competition in the petroleum and nitrogen fertilizer businesses;
- capital expenditures and potential liabilities arising from environmental laws and regulations;
- changes in ours or CVR Refining's or CVR Partners' credit profile;
- the cyclical nature of the nitrogen fertilizer business;
- the seasonal nature of the petroleum business;
- the supply and price levels of essential raw materials of our businesses;
- the risk of a material decline in production at our refineries and nitrogen fertilizer plants;
- potential operating hazards from accidents, fire, severe weather, tomadoes, floods or other natural disasters;
- the risk associated with governmental policies affecting the agricultural industry;

[Table of Contents](#)

- the volatile nature of ammonia, potential liability for accidents involving ammonia that cause interruption to the nitrogen fertilizer business, severe damage to property and/or injury to the environment and human health and potential increased costs relating to the transport of ammonia;
- the dependence of the nitrogen fertilizer business on a few third-party suppliers, including providers of transportation services and equipment;
- new regulations concerning the transportation of hazardous chemicals, risks of terrorism, and the security of chemical manufacturing facilities and other matters beyond our control;
- the risk of security breaches;
- the petroleum business' and the 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, including the completion of significant capital programs;
- our ability to continue to license the technology used in the petroleum business and nitrogen fertilizer business operations;
- our petroleum business' ability to purchase RINs on a timely and cost effective basis;
- our petroleum business' continued ability to secure environmental and other governmental permits necessary for the operation of its business;
- existing and proposed laws, rulings and regulations, 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 and application of fertilizers;
- refinery and nitrogen fertilizer facilities' operating hazards and interruptions, including unscheduled maintenance or downtime, and the availability of adequate insurance coverage;
- instability and volatility in the capital and credit markets;
- potential exposure to underfunded pension obligations of affiliates as a member of the controlled group of Mr. Icahn; and
- our ability to recover under our insurance policies for damages or losses in full or at all.

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.

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

There have been no material changes to our market risks as of September 30, 2018 and for the three and nine months ended September 30, 2018 from the risks discussed in Part II, Item 7A of our 2017 Form 10-K.

**Item 4. *Controls and Procedures***

***Evaluation of Disclosure Controls and Procedures***

As of September 30, 2018, we have evaluated, under the direction of our Chief Executive Officer, Chief Financial Officer and Chief Accounting Officer, the effectiveness of our disclosure controls and procedures, as defined in Exchange Act Rule 13a-15(e). Based upon and as of the date of that evaluation, our Chief Executive Officer, Chief Financial Officer and Chief Accounting Officer, concluded that our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Security and Exchange Commission's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer, our Chief Financial Officer and our Chief Accounting Officer, as appropriate, to allow timely decisions regarding required disclosure.

***Changes in Internal Control Over Financial Reporting***

There has been no change in our internal control over financial reporting required by Rule 13a-15 of the Exchange Act that occurred during the fiscal quarter ended September 30, 2018 that has 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 9 ("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 the "Risk Factors" section in our 2017 Form 10-K.

### Item 5. *Other Information*

None.

### Item 6. *Exhibits*

Exhibit Number	Exhibit Description
<a href="#">10.1*</a>	<a href="#">CVR Energy, Inc. Change in Control and Severance Plan, effective September 13, 2018.</a>
<a href="#">10.2*</a>	<a href="#">CVR Energy, Inc. 2018 Performance-Based Bonus Plan approved September 13, 2018.</a>
<a href="#">10.3*</a>	<a href="#">Amendment to the Performance Unit Agreement, dated September 17, 2018, by and between CVR Energy, Inc. and David L. Lamp.</a>
<a href="#">31.1*</a>	<a href="#">Rule 13a-14(a)/15(d)-14(a) Certification of President and Chief Executive Officer.</a>
<a href="#">31.2*</a>	<a href="#">Rule 13a-14(a)/15(d)-14(a) Certification of Executive Vice President and Chief Financial Officer.</a>
<a href="#">31.3*</a>	<a href="#">Rule 13a-14(a)/15(d)-14(a) Certification of Chief Accounting Officer and Corporate Controller.</a>
<a href="#">32.1†</a>	<a href="#">Section 1350 Certification of President and Chief Executive Officer, Executive Vice President and Chief Financial Officer and Chief Accounting Officer and Corporate Controller.</a>
101*	The following financial information for CVR Energy, Inc.'s Quarterly Report on Form 10-Q for the quarter ended September 30, 2018 formatted in 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.

\* Filed herewith.

† Furnished herewith.

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.**

October 25, 2018

By:

/s/ TRACY D. JACKSON

*Executive Vice President and Chief Financial Officer  
(Principal Financial Officer)*

October 25, 2018

By:

/s/ MATTHEW W. BLEY

*Chief Accounting Officer and Corporate Controller  
(Principal Accounting Officer)*

**CVR ENERGY, INC.**  
**CHANGE IN CONTROL AND SEVERANCE PLAN**

1. **Introduction.** The purpose of this CVR Energy, Inc. Change in Control and Severance Plan (the “**Plan**”) is to provide assurances of specified benefits to designated employees of the Company who are members of a select group of management or highly compensated employees (as determined in accordance with Section 201(2), 301(a)(3) and 401(a)(1) of ERISA) in the event their employment is involuntarily terminated in connection with a Change in Control under the circumstances described in this Plan. Effective as of the effective date of the Change in Control, but contingent on the occurrence of the Change in Control, unless otherwise agreed to in writing between the Company or an Affiliate and an Eligible Employee on or after the date hereof, this Plan shall supersede, and Eligible Employees covered by the Plan shall not be eligible to participate in, the Coffeyville Resources, LLC Severance Pay Plan, the CVR Partners, LP Severance Pay Plan, the CVR Refining, LP Severance Pay Plan, or any other severance or termination plan, policy or practice of the Company or any of its Affiliates that would otherwise apply under the circumstances described herein. The Plan is intended to be a “top-hat” pension benefit plan within the meaning of U.S. Department of Labor Regulation Section 2520.104-24.

2. **Important Terms.** In addition to the defined terms set forth throughout the Plan, the following words and phrases, when the initial letter of the term is capitalized, will have the meanings set forth in this Section 2, unless a different meaning is plainly required by the context:

2.1 “**Accrued Amounts**” means the sum of any Base Pay earned but unpaid through the date of termination, any unused accrued paid time off in accordance with the applicable Company paid time off policy, any unreimbursed expenses in accordance with the Company’s expense reimbursement policy, and any accrued and vested rights or benefits under any Company sponsored employee benefits plans payable in accordance with the terms and conditions of such plans.

2.2 “**Administrator**” means the Company, acting through the Compensation Committee or another duly constituted committee of members of the Board, or any person to whom the Administrator has delegated any authority or responsibility with respect to the Plan pursuant to Section 10, but only to the extent of such delegation.

2.3 “**Affiliate**” means any Person that a Person either directly or indirectly through one or more intermediaries is in common control with, is controlled by or controls, each within the meaning of the Securities Act of 1933, as amended.

2.4 “**Base Pay**” means an Eligible Employee’s annualized base salary in effect immediately prior to the termination of employment. Base Pay shall not include commissions, bonuses, overtime pay, incentive compensation, benefits paid under any qualified plan, any group medical, dental or other welfare benefit plan, non-cash compensation or any other additional compensation, but shall include amounts reduced

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pursuant to an Eligible Employee's salary reduction agreement under Section 125, 132(f)(4) or 401(k) of the Code, if any, or a nonqualified elective deferred compensation arrangement, if any, to the extent that in each such case the reduction is to base salary.

2.5 "**Board**" means the Board of Directors of the Company.

2.6 "**Cause**" means, with respect to an Eligible Employee, the occurrence of any of the following: (i) willful failure of an employee to perform substantially his/her duties (other than any such failure resulting from incapacity due to disability); (ii) commission of, or indictment for, a felony or any crime involving fraud or embezzlement or dishonestly or conviction of, or plea of guilty or *nolo contendere* to a crime or misdemeanor (other than a traffic violation) punishable by imprisonment under federal, state or local law; (iii) engagement in an act of fraud or other act of willful dishonesty or misconduct, towards the Company or any subsidiary, or detrimental to the Company or any subsidiary, or in the performance of the Eligible Employee's duties; (iv) negligence in the performance of employment duties that has a detrimental effect on the Company or any subsidiary; (v) violation of a federal or state securities law or regulation; (vi) the use of a controlled substance without a prescription or the use of alcohol which, in each case, significantly impairs the Eligible Employee's ability to carry out his or her duties and responsibilities; (vii) material violation of the policies and procedures of the Company or any subsidiary; (viii) embezzlement and/or misappropriation of property of the Company or any subsidiary; (ix) conduct involving any immoral acts which is reasonably likely to impair the reputation of the Company or any subsidiary; or (x) material breach of the Eligible Employee's covenants in Section 6 of the Plan after written notice of such breach and failure by the Eligible Employee to cure such breach within 10 business days; provided, however, that no such notice of, nor opportunity to cure, such breach shall be required hereunder if the breach cannot be cured by the Eligible Employee.

2.7 "**Change in Control**" means the first occurrence of any of the following:

(a) An acquisition (other than directly from the Company) of any voting securities of the Company (the "**Voting Securities**") by any "Person" (as the term "person" is used for purposes of Section 13(d) or 14(d) of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**")), immediately after which such Person has "**Beneficial Ownership**" (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of more than fifty percent (50%) of (i) the then-outstanding Shares or (ii) the combined voting power of the Company's then-outstanding Voting Securities; provided, however, that in determining whether a Change in Control has occurred pursuant to this paragraph (a), the acquisition of Shares or Voting Securities in a Non-Control Acquisition (as hereinafter defined) shall not constitute a Change in Control. A "**Non-Control Acquisition**" shall mean an acquisition by (i) an employee benefit plan (or a trust forming a part thereof) maintained by (A) the Company or (B) any corporation or other Person the majority of the voting power, voting equity securities or equity

interest of which is owned, directly or indirectly, by the Company (for purposes of this definition, a “**Subsidiary**”), (ii) the Company, any Principal Stockholder or any Subsidiary, or (iii) any Person in connection with a Non-Control Transaction (as hereinafter defined);

(b) The consummation of:

(i) A merger, consolidation or reorganization of a Person (x) with or into the Company or (y) in which securities of the Company are issued (a “**Merger**”), unless such Merger is a “**Non-Control Transaction**.” A “**Non-Control Transaction**” shall mean a Merger in which:

(A) the shareholders of the Company immediately before such Merger, or one or more Principal Stockholders, own directly or indirectly immediately following such Merger at least a majority of the combined voting power of the outstanding voting securities of (1) the corporation resulting from such Merger (the “**Surviving Corporation**”), if fifty percent (50%) or more of the combined voting power of the then outstanding voting securities by the Surviving Corporation is not Beneficially Owned, directly or indirectly, by another Person (a “**Parent Corporation**”) or (2) if there is one or more than one Parent Corporation, the ultimate Parent Corporation;

(B) the individuals who were members of the Board immediately prior to the execution of the agreement providing for such Merger constitute at least a majority of the members of the board of directors of (1) the Surviving Corporation, if there is no Parent Corporation, or (2) if there is one or more than one Parent Corporation, the ultimate Parent Corporation; and

(C) no Person other than (1) the Company or another corporation that is a party to the agreement of Merger, (2) any Subsidiary, (3) any employee benefit plan (or any trust forming a part thereof) that, immediately prior to the Merger, was maintained by the Company or any Subsidiary, (4) any Person who, immediately prior to the Merger, had Beneficial Ownership of thirty percent (30%) or more of the then outstanding Shares or Voting Securities, or (5) any Principal Stockholder, has Beneficial Ownership, directly or indirectly, of fifty percent (50%) or more of the combined voting power of the outstanding voting securities or common stock of (x) the Surviving Corporation, if there is no Parent Corporation,

or (y) if there is one or more than one Parent Corporation, the ultimate Parent Corporation.

(ii) A complete liquidation or dissolution of the Company; or

(iii) The sale or other disposition of all or substantially all of the assets of the Company and its subsidiaries taken as a whole to any Person (other than (x) a sale or transfer to a Subsidiary or a Principal Stockholder (or one or more Principal Stockholders acting together) or (y) the distribution to the Company's shareholders of the stock of a Subsidiary or any other assets).

Notwithstanding the foregoing, a Change in Control shall not be deemed to occur solely because any Person (the "**Subject Person**") acquired Beneficial Ownership of more than the permitted amount of the then outstanding Shares or Voting Securities as a result of the acquisition of Shares or Voting Securities by the Company which, by reducing the number of Shares or Voting Securities then outstanding, increases the proportional number of shares Beneficially Owned by the Subject Persons; provided that if a Change in Control would occur (but for the operation of this sentence) as a result of the acquisition of Shares or Voting Securities by the Company and, after such share acquisition by the Company, the Subject Person becomes the Beneficial Owner of any additional Shares or Voting Securities and such Beneficial Ownership increases the percentage of the then outstanding Shares or Voting Securities Beneficially Owned by the Subject Person, then a Change in Control shall occur.

For the avoidance of doubt, following the occurrence of the first event that constitutes a Change in Control hereunder, no other Change in Control shall occur for purposes of this Plan. Notwithstanding anything herein to the contrary, no payment shall be made under Section 4.1 (in the case of a Change in Control Related Termination) or under Section 4.2 (in the case of a Change in Control Related Termination or an Involuntary Termination) unless the "Change in Control" constitutes a "change in control event" within the meaning of Code Section 409A.

2.8 "**Change in Control Period**" means the time period beginning on the date of the first Change in Control occurring after the Effective Date and ending on the date that is twenty-four (24) months following the date of such Change in Control.

2.9 "**Change in Control Related Termination**" means a termination of the Eligible Employee's employment by the Company or any subsidiary of the Company other than for Cause or the Eligible Employee's resignation for Good Reason, in each case within the one hundred twenty (120) day period prior to the occurrence of a Change in Control and (A) the Company determines in good faith that such termination or the basis for resignation for Good Reason occurred in anticipation of a transaction that, if consummated, would constitute a Change in Control, (B) such termination or the basis for resignation for Good

Reason occurred after the Company entered into a definitive agreement, the consummation of which would constitute a Change in Control or (C) the Company determines in good faith that such termination or the basis for resignation for Good Reason was implemented at the request of a third party who has indicated an intention or has taken steps reasonably calculated to effect a Change in Control. For the avoidance of doubt, the occurrence of a Change in Control Related Termination is conditioned upon the consummation of a Change in Control on or prior to December 31, 2022.

2.10 “**Code**” means the Internal Revenue Code of 1986, as amended.

2.11 “**Company**” means CVR Energy, Inc., a Delaware corporation, and any successor that assumes the obligations of the Company under the Plan, by way of merger, acquisition, consolidation or other transaction.

2.12 “**Compensation Committee**” means the Compensation Committee of the Board.

2.13 “**Control**” means the possession, directly or indirectly, of the power to direct or cause the direction of management and policies of a Person, whether through the ownership of stock, by agreement or otherwise and “Controlled” has a corresponding meaning.

2.14 “**Effective Date**” means June \_\_, 2018.

2.15 “**Eligible Employee**” means an employee of the Company or any subsidiary of the Company who (a) has been specifically designated as eligible to participate in the Plan pursuant to notification in writing from the Administrator, (b) is a member of a select group of management or highly compensated employees and (c) has timely and properly executed and delivered a Participation Agreement to the Company. Appendix A sets forth an initial listing of employees whose positions will be eligible to participate in the Plan, provided he or she timely and properly executes a Participation Agreement.

2.16 “**ERISA**” means the Employee Retirement Income Security Act of 1974, as amended.

2.17 “**Good Reason**” means, the occurrence, without an Eligible Employee’s consent, of any of the following: (a) the assignment of duties or responsibilities to the Eligible Employee that reflect a material diminution of the Eligible Employee’s position with the Company; (b) a material reduction by the Company in the Eligible Employee’s Base Pay, other than across-the-board reductions applicable to similarly situated employees of the Company; or (c) a relocation of the Eligible Employee’s principal place of employment to a location more than fifty (50) miles from the Company’s current headquarters in Sugar Land, Texas. In order for an event to qualify as Good Reason, (i) the Eligible Employee must not terminate employment with the Company without first providing the Company with written notice of the acts or omissions constituting the grounds for “Good Reason” within thirty (30) calendar days of the initial existence of the grounds for “Good Reason”

and a reasonable cure period of thirty (30) calendar days following the date of written notice (the “**Cure Period**”), and such grounds must not have been cured during such time, and the Eligible Employee must resign his or her employment within the thirty (30) calendar days following the end of the Cure Period.

2.18 “**Incentive / Phantom Unit Awards**” means any outstanding cash-settled incentive or phantom unit award granted to an Eligible Employee by the Company or its Affiliates, and any other awards approved by the Compensation Committee at the time of the award.

2.19 “**Involuntary Termination**” means a termination of an Eligible Employee’s employment by the Eligible Employee for Good Reason or by the Company or a subsidiary of the Company without Cause. For the avoidance of doubt, an Involuntary Termination shall not include any termination of employment by the Company or a subsidiary of the Company for Cause, due to an Eligible Employee’s death or disability or for any other reason.

2.20 “**Participation Agreement**” means the individual agreement (a form of which is shown in Appendix B) provided by the Administrator to an Eligible Employee under the Plan, which has been signed and accepted by the employee.

2.21 “**Person**” shall mean any individual, partnership, limited partnership, corporation, limited liability company, trust, foundation, estate, cooperative, association (except for any homeowners association), organization, proprietorship, firm, joint venture, joint stock company, syndicate, company, committee, government or governmental subdivision or agency, or other entity, whether or not conducted for profit.

2.22 “**Principal**” means Carl Icahn.

2.23 “**Principal Stockholder**” means any of IEP Energy LLC, any Affiliate of IEP Energy LLC, the Principal and any Related Party.

2.24 “**Related Party**” means (1) the Principal and his siblings, his and their respective spouses and descendants (including stepchildren and adopted children) and the spouses of such descendants (including stepchildren and adopted children) (collectively, the “**Family Group**”); (2) any trust, estate, partnership, corporation, company, limited liability company or unincorporated association or organization (each, an “**Entity**” and collectively “**Entities**”) Controlled by one or more members of the Family Group; (3) any Entity over which one or more members of the Family Group, directly or indirectly, have rights that, either legally or in practical effect, enable them to make or veto significant management decisions with respect to such Entity, whether pursuant to the constituent documents of such Entity, by contract, through representation on a board of directors or other governing body of such Entity, through a management position with such Entity or in any other manner (such rights, hereinafter referred to as “**Veto Power**”); (4) the estate of any member of the Family Group; (5) any trust created (in whole or in part) by any one or more members of the Family Group; (6) any individual or Entity who receives an interest in any estate or trust

listed in clauses (4) or (5), to the extent of such interest; (7) any trust or estate, substantially all the beneficiaries of which (other than charitable organizations or foundations) consist of one or more members of the Family Group; (8) any organization described in Section 501(c) of the Code, over which any one or more members of the Family Group and the trusts and estates listed in clauses (4), (5) and (7) have direct or indirect Veto Power, or to which they are substantial contributors (as such term is defined in Section 507 of the Code); (9) any organization described in Section 501(c) of the Code of which a member of the Family Group is an officer, director or trustee; or (10) any Entity, directly or indirectly (a) owned or Controlled by or (b) a majority of the economic interests in which are owned by, or are for or accrue to the benefit of, in either case, any Person or Persons identified in clauses (1) through (9) above. For the purposes of this definition, and for the avoidance of doubt, in addition to any Person or Persons that may be considered to possess Control, (x) a partnership shall be considered Controlled by a general partner or managing general partner thereof, (y) a limited liability company shall be considered Controlled by a managing member of such limited liability company and (z) a trust or estate shall be considered Controlled by any trustee, executor, personal representative, administrator or any other Person or Persons having authority over the control, management or disposition of the income and assets therefrom.

2.25 **“Restricted Period”** means, with respect to each Eligible Employee, the twelve (12) month period following such Eligible Employee’s termination of employment for any reason or such other time period specified in the Participation Agreement.

2.26 **“Section 409A Limit”** means two (2) times the lesser of: (i) an Eligible Employee’s annualized compensation based upon the annual rate of pay paid to the Eligible Employee during the Eligible Employee’s taxable year preceding the Eligible Employee’s taxable year of the Eligible Employee’s termination of employment as determined under, and with such adjustments as are set forth in, Treasury Regulation Section 1.409A-1(b)(9)(iii)(A)(1) and any Internal Revenue Service guidance issued with respect thereto; or (ii) the maximum amount that may be taken into account under a qualified plan pursuant to Section 401(a)(17) of the Code for the year in which the Eligible Employee’s employment is terminated.

2.27 **“Severance Benefits”** means the compensation and other benefits that an Eligible Employee is entitled to receive pursuant to Sections 4.1 and 4.2, provided that he or she is an Eligible Employee on the date he or she experiences an Involuntary Termination during the Change in Control Period.

2.28 **“Share”** means the common stock, par value \$.01 per share, of the Company and any other securities into which such shares are changed or for which such shares are exchanged.

3. **Eligibility for Severance Benefits.** An individual is eligible for Severance Benefits under the Plan, as described in Section 4, only if he or she is an Eligible Employee on the date he or she (a) experiences an Involuntary Termination during the Change in Control Period, or (b) experiences a Change in Control Related Termination.

**4. Involuntary Termination During the Change in Control Period or Change in Control Termination.** If, (a) during the Change in Control Period, an Eligible Employee experiences an Involuntary Termination, or (b) an Eligible Employee experiences a Change in Control Related Termination, then, in either case, subject to the Eligible Employee's compliance with the terms and conditions of the Plan, including without limitation, Section 6, in addition to the Accrued Amounts, the Eligible Employee will be entitled to receive the following Severance Benefits from the Company:

**4.1 Cash Severance Benefits.** A cash severance payment, equal to the sum of (a) twelve (12) months of Base Pay, and (b) the average of the annual bonuses actually paid to the Eligible Employee during the three calendar years immediately preceding the date of the Involuntary Termination or the date of the consummation of a Change in Control in the case of a Change in Control Related Termination (or, in each case, such shorter period of time if applicable), payable in a lump sum on the Company's first payroll date following the 60<sup>th</sup> day after (i) the date of the Involuntary Termination or (ii) the date of the consummation of a Change in Control, as applicable. In the event an Eligible Employee has no previous annual bonus history (i.e. those hired after the most recent annual bonus payout), then the annual bonus portion of the cash severance payment will be calculated based on 100% of the Eligible Employee's current target bonus; and

**4.2 Incentive / Phantom Unit Award Vesting Acceleration.** Accelerated vesting as to 100% of the unvested portion of any then outstanding Incentive / Phantom Unit Awards held by the Eligible Employee, or, in the event of a Change in Control Related Termination and with respect to any Incentive / Phantom Unit Awards issued by an Affiliate of the Company, payments equivalent to the amounts the Eligible Employee would have received had any then outstanding Incentive / Phantom Unit Awards accelerated (without any duplication of vesting and/or payment), in each case, with the payout value calculated based on the average closing price per share of the underlying unit for the twenty (20) business days preceding the date of the Involuntary Termination or the date of the consummation of the Change in Control in the case of a Change in Control Related Termination, as applicable, provided, however, that any Incentive / Phantom Unit Awards that vest (in whole or in part) upon the achievement of performance goals shall vest as if the target level of performance had been achieved. Such payment, if any, shall be payable in a lump sum on the Company's first payroll date following the 60<sup>th</sup> day after (i) the date of the Involuntary Termination or (ii) the date of the consummation of a Change in Control, as applicable.

**4.3 Offset.** The Severance Benefits shall be reduced (offset) by any amounts payable (i) under any statutory entitlement (including notice of termination, termination pay and/or severance pay) of the Eligible Employee upon a termination of employment, including, without limitation, any payments related to an actual or potential liability under the Worker Adjustment and Retraining Notification Act (WARN) or similar state or local law, and (ii) pursuant to any agreement between the Eligible Employee and the Company or any of its Affiliates.

## 5. Effect of Section 280G of the Code.

5.1 **Payment Reduction.** Notwithstanding anything contained herein to the contrary, (i) to the extent that any payment or distribution of any type to or for the benefit of an Eligible Employee by the Company, any Affiliate of the Company, any Person who acquires ownership or effective control of the Company or ownership of a substantial portion of the Company's assets (within the meaning of Section 280G of the Code and the regulations thereunder), or any Affiliate of such Person, whether paid or payable or distributed or distributable pursuant to the terms of the Plan or otherwise (the "**Payments**") constitutes "parachute payments" (within the meaning of Section 280G of the Code), and if (ii) such aggregate Payments would, if reduced by all federal, state and local taxes applicable thereto, including the excise tax imposed under Section 4999 of the Code (the "**Excise Tax**"), be less than the amount the Eligible Employee would receive, after all taxes, if the Eligible Employee received aggregate Payments equal (as valued under Section 280G of the Code) to only three times the Eligible Employee's "base amount" (within the meaning of Section 280G of the Code), less \$1.00, then (iii) such Payments shall be reduced (but not below zero) if and to the extent necessary so that no Payments to be made or benefit to be provided to the Eligible Employee shall be subject to the Excise Tax. If the Payments are so reduced, the Company shall reduce or eliminate the Payments (x) by first reducing or eliminating the portion of the Payments which are not payable in cash (other than that portion of the Payments subject to clause (z) hereof), (y) then by reducing or eliminating cash payments (other than that portion of the Payments subject to clause (z) hereof) and (z) then by reducing or eliminating the portion of the Payments (whether payable in cash or not payable in cash) to which Treasury Regulation Section 1.280G-1 Q/A 24(c) (or successor thereto) applies, in each case in reverse order beginning with payments or benefits which are to be paid the farthest in time.

5.2 **Determination of Amount of Reduction (if any).** The determination of whether the Payments shall be reduced as provided in Section 5.1 hereof and the amount of such reduction shall be made at the Company's expense by a nationally-recognized accounting firm selected by the Company (the "**Accounting Firm**"). The Accounting Firm shall provide its determination (the "**Determination**"), together with detailed supporting calculations and documentation, to the Company and the Eligible Employee within 10 calendar days after the Eligible Employee's final day of employment. If the Accounting Firm determines that no Excise Tax is payable by the Eligible Employee with respect to the Payments, it shall furnish the Eligible Employee with an opinion reasonably acceptable to the Eligible Employee that no Excise Tax will be imposed with respect to any such payments and, absent manifest error, such Determination shall be binding, final and conclusive upon the Company and the Eligible Employee.

6. **Conditions to Receipt and Retention of Severance Benefits.** Each Eligible Employee is required to comply with all the terms and conditions set forth in this Section 6 in order to receive Severance Benefits under the Plan.

**6.1 Release Agreement.** As a condition to receiving the Severance Benefits under the Plan, each Eligible Employee will be required to sign and not revoke a separation and release of claims agreement in a form provided to such Eligible Employee, which will be provided by the Company within five (5) calendar days following the Involuntary Termination date (the “**Release**”). In all cases, the Release must become effective and irrevocable under applicable law no later than the sixtieth (60th) calendar day following the Eligible Employee’s Involuntary Termination. If the Release does not become effective and irrevocable by such 60<sup>th</sup> calendar day, the Eligible Employee will immediately forfeit any and all rights to the Severance Benefits. For the avoidance of doubt, in no event will the Severance Benefits be paid or provided until the Release becomes effective and irrevocable.

**6.2 Confidentiality and Non-Disparagement.**

6.2.1 During the term of an Eligible Employee’s employment with the Company or any of its Affiliates and at all times thereafter, the Eligible Employee shall hold in a fiduciary capacity for the benefit of the Company and each of its Affiliates, all secret or confidential information, knowledge or data, including, without limitation, technical information, intellectual property, business and marketing plans, strategies, customer information and lists, software, trade secrets, sources of supplies and materials, designs, production and design techniques and methods, identity of investments, identity of contemplated investments, business opportunities, valuation models and methodologies, processes, technologies, and any other intellectual property relating to the business, or other information concerning the products, promotions, development, financing, expansion plans, business policies and practices, of the Company and each of its Affiliates, and their respective businesses, and other forms of information considered by the Company and its Affiliates to be confidential and in the nature of trade secrets (i) obtained by the Eligible Employee during the Eligible Employee’s employment by the Company or any of its Affiliates and/or during any period of time in which the Eligible Employee has access to email and/or information technology services from the Company, and (ii) not otherwise in the public domain (collectively, “**Confidential Information**”).

6.2.2 Each Eligible Employee must keep confidential and not to publish, post on his or her own or to disclose any personal information regarding any controlling Person of the Company (or any of its Affiliates), including, without limitation, Carl C. Icahn, or any of his Affiliates and their respective employees, and any member of the immediate family of any such Person (and all such personal information shall be deemed “Confidential Information” for the purposes of the Plan). Each Eligible Employee shall not, without the prior written consent of the Company (acting at the direction of the Board): (i) except to the extent compelled pursuant to the order of a court or other body having jurisdiction over such matter or based upon the advice of counsel that such disclosure is legally required, communicate or divulge any Confidential Information to anyone other than the Company and those designated by the Company; or (ii) use any Confidential

Information for any purpose other than the performance of his or her duties pursuant to such Eligible Employee's employment with the Company or any of its Affiliates. Each Eligible Employee will assist the Company or its designee, at the Company's expense, in obtaining a protective order, other appropriate remedy or other reliable assurance that confidential treatment will be accorded any Confidential Information disclosed pursuant to the terms of the Plan. Each Eligible Employee agrees not to disparage the Company, its officers and directors, Mr. Icahn, any Related Parties, or any Affiliate of any of the foregoing, in each case during and/or after such Eligible Employee's employment with the Company or any of its Affiliates. Without limiting anything contained above, each Eligible Employee agrees and acknowledges that all personal and not otherwise public information about the Company and its Affiliates (including, without limitation, all information regarding Icahn Enterprises L.P. ("IEP"), Carl C. Icahn, Mr. Icahn's family, and employees of the Company, IEP and their respective Affiliates) shall constitute Confidential Information for purposes of the Plan.

6.2.3 Each Eligible Employee must not write, contribute to, or assist any other person in writing or creating, a book, film, broadcast, article, blog or any other publication (whether in print, electronic or any other form) about or concerning, in whole or in part, the Company, IEP, Mr. Icahn and his family members or any of the respective Affiliates and subsidiaries of any of the foregoing (as applicable), in any media, and not to publish or cause to be published in any media, any Confidential Information, and must keep confidential and not to disclose to any third party, including, but not limited to, newspapers, authors, publicists, journalists, bloggers, gossip columnists, producers, directors, script writers, media personalities, and the like, in any and all media or communication methods, any Confidential Information. In furtherance of the foregoing, following the termination of the Eligible Employee's employment with the Company or any of its Affiliates, the sole and only disclosure or statement the Eligible Employee shall be permitted to make about or concerning any or all of the Company, IEP, Mr. Icahn and his family members or any of the respective Affiliates and subsidiaries of any of the foregoing (as applicable) is to acknowledge that the Eligible Employee is or was employed by the Company (unless otherwise required by applicable law).

**6.3 Non-Competition and Non-Solicitation.** As a condition of receiving the Severance Benefits under the Plan, and in order to protect Confidential Information, each Eligible Employee will not, either directly or indirectly, during the Restricted Period:

6.3.1 own, manage, operate, join, control, be employed by, or participate in the ownership, management, operation or control of, or be connected in any manner with, including, without limitation, holding any position as a principal, agent, owner, stockholder, director, officer, consultant, advisor, independent contractor, employee, partner, or investor in, any Restricted Enterprise (as defined below); provided, that in no event shall ownership of one percent (1%) or less of the outstanding securities of any class of any issuer whose securities are registered under the Exchange Act,

standing alone, be prohibited by this Section 6.3, so long as the Eligible Employee does not have, or exercise, any rights to manage or operate the business of such issuer other than rights as a stockholder thereof. For purposes of this paragraph, “**Restricted Enterprise**” shall mean any Person that is actively engaged in any business which is either (i) in competition with the business of the Company or any of its Affiliates conducted during the six months preceding the Eligible Employee’s Involuntary Termination, or (ii) proposed to be conducted by the Company or any of its Affiliates in the Company’s or Affiliate’s business plan as in effect at the time of the Eligible Employee’s Involuntary Termination; provided, that a Restricted Enterprise shall only include such a Person that primarily operates within the States of Kansas, Oklahoma or Texas or any other state where the Company or any of its subsidiaries conducts business operations. During the Restriction Period, upon request of the Company, the Eligible Employee shall notify the Company of the Eligible Employee’s then-current employment status. For the avoidance of doubt, a Restricted Enterprise shall not include any Person or division thereof that is engaged in the business of supplying (but not refining) crude oil or natural gas;

6.3.2 solicit (or assist any Person to solicit) for employment any person who is, or within six months prior to the date of such solicitation was, an employee of the Company or any of its Affiliates, provided, however, that this Section 6.3 shall not prohibit the hiring of any individual as a result of the individual’s response to an advertisement in a publication of general circulation; and

6.3.3 (i) solicit, interfere with or entice away from the Company or any of its Affiliates, any current supplier, customer or client, (ii) direct or solicit any current supplier, customer or client away from the Company or any of its Affiliates, or (iii) advise any Person not to do business with, or be employed by the Company or any of its Affiliates.

6.4 **Severability.** The covenants contained in Section 6 shall be construed as a series of separate covenants, one for each city, county and state of any geographic area. Except for geographic coverage, each such separate covenant shall be deemed identical in terms to the covenant contained in subsections 6.2 and 6.3 above. If, in any judicial or arbitration proceeding, a court or arbitrator refuses to enforce any of such separate covenants (or any part thereof), then such unenforceable covenant (or such part) shall be eliminated from the Plan to the extent necessary to permit the remaining separate covenants (or portions thereof) to be enforced. In the event the provisions of subsection 6.2 or 6.3 above are deemed to exceed the time, geographic, or scope limitations permitted by applicable law, then such provisions shall be reformed by the court or arbitrator to cover the maximum time, geographic, or scope limitations, as the case may be, then permitted by such law.

6.5 **Other Requirements.** An Eligible Employee’s receipt and retention of the Severance Benefits will be subject to the Eligible Employee continuing to comply with the provisions of this Section 6 and the terms of any other confidentiality, proprietary information and inventions agreement, including any non-competition and non-solicitation covenants

contained therein (which are additional obligations, and not replaced by the provisions of this Section 6), and such other appropriate agreements between the Eligible Employee and the Company. In the event an Eligible Employee fails to comply with his or her obligations or breaches any covenant or other agreement under this Section 6 or such other appropriate agreements between the Eligible Employee and the Company, (i) such Eligible Employee shall not be entitled to receive and/or retain the Severance Benefits and shall be required to immediately repay to the Company all Severance Benefits previously paid to him or her under the Plan and forfeit all unpaid Severance Benefits (if any) that remain payable to him or her under the Plan, (ii) the Company shall have the right to fully recover from such Eligible Employee all Severance Benefits paid to him or her under the Plan, and (iii) such Eligible Employee agrees not to assert any defenses, rights of set-off or counterclaims as a reason for not repaying such amount under subsections (i) and (ii).

7. **Non-Duplication of Benefits; Survival of Other Benefits.** Notwithstanding any other provision in the Plan to the contrary, if an Eligible Employee is entitled to any severance, change in control or similar benefits outside of the Plan by operation of applicable law or under another Company-sponsored plan, policy, contract, or arrangement, his or her benefits under the Plan will be reduced by the value of the severance, change in control or similar benefits that the Eligible Employee receives by operation of applicable law or under any Company-sponsored plan, policy, contract, or arrangement, all as determined by the Administrator in its discretion. Subject to the foregoing, the Plan is not intended to amend, modify, terminate, or supersede any severance, change in control or similar benefits provided under any contract with any Eligible Employee, and to the extent any such contract offers severance, change in control or similar benefits that are more advantageous to the Eligible Employee than the terms hereof, such Eligible Employee shall continue to be entitled to such benefits.

#### 8. **Section 409A.**

8.1 Notwithstanding anything to the contrary in the Plan, no severance payments or benefits to be paid or provided to an Eligible Employee, if any, under the Plan that, when considered together with any other severance payments or separation benefits, are considered deferred compensation under Section 409A of the Code, and the final regulations and any guidance promulgated thereunder (“**Section 409A**”) (together, the “**Deferred Payments**”) will be paid or provided until the Eligible Employee has a “separation from service” within the meaning of Section 409A. Similarly, no severance payable to an Eligible Employee, if any, under the Plan that otherwise would be exempt from Section 409A pursuant to Treasury Regulation Section 1.409A-1(b)(9) will be payable until the Eligible Employee has a “separation from service” within the meaning of Section 409A.

8.2 It is intended that none of the severance payments or benefits under the Plan will constitute Deferred Payments but rather will be exempt from Section 409A as a payment that would fall within the “short-term deferral period” as described in Section 8.4 below or resulting from an involuntary separation from service as described in Section 8.5 below. In no event will an Eligible Employee have discretion to determine the taxable year of payment of any Deferred Payment.

8.3 Notwithstanding anything to the contrary in the Plan, if an Eligible Employee is a “specified employee” within the meaning of Section 409A at the time of the Eligible Employee’s separation from service (other than due to death), then the Deferred Payments, if any, that are payable within the first six (6) months following the Eligible Employee’s separation from service, will become payable on the date six (6) months and one (1) day following the date of the Eligible Employee’s separation from service. Notwithstanding anything herein to the contrary, in the event of the Eligible Employee’s death following the Eligible Employee’s separation from service, but before the six (6) month anniversary of the separation from service, then any payments delayed in accordance with this paragraph will be payable in a lump sum as soon as administratively practicable after the date of the Eligible Employee’s death. Each payment and benefit payable under the Plan is intended to constitute a separate payment under Section 1.409A-2(b)(2) of the Treasury Regulations.

8.4 Any amount paid under the Plan that satisfies the requirements of the “short-term deferral” rule set forth in Treasury Regulation Section 1.409A-1(b)(4) will not constitute Deferred Payments for purposes of Section 8.1 above.

8.5 Any amount paid under the Plan that qualifies as a payment made as a result of an involuntary separation from service pursuant to Treasury Regulation Section 1.409A-1(b)(9)(iii) that does not exceed the Section 409A Limit will not constitute Deferred Payments for purposes of Section 8.1 above.

8.6 The foregoing provisions are intended to comply with or be exempt from the requirements of Section 409A so that none of the payments and benefits to be provided under the Plan will be subject to the additional tax imposed under Section 409A, and any ambiguities herein will be interpreted to so comply or be exempt. Notwithstanding anything to the contrary in the Plan, including but not limited to Sections 10 and 13, the Company reserves the right to amend the Plan as it deems necessary or advisable, in its sole and absolute discretion and without the consent of an Eligible Employee, to comply with Section 409A or to avoid income recognition under Section 409A prior to the actual payment of benefits under the Plan or imposition of any additional tax. In no event will the Company reimburse an Eligible Employee for any taxes that may be imposed on the Eligible Employee as result of Section 409A.

9. **Withholdings.** The Company will withhold from any payments or benefits under the Plan all applicable U.S. federal, state, local and non-U.S. taxes required to be withheld and any other required payroll deductions.

10. **Administration.** The Plan will be administered and interpreted by the Administrator (in its sole and absolute discretion). Any decision made or other action taken by the Administrator with respect to the Plan, and any interpretation by the Administrator of any term or condition of the Plan, or any related document, will be conclusive and binding on all persons and be given the maximum possible deference allowed by law. In accordance with Section 2.2, the Administrator (a) may, in its sole and absolute discretion and on such terms and conditions as it may provide, delegate in writing to one or more officers of the Company all or any portion of its authority or responsibility with respect to the Plan, and (b) has the authority to act for the Company (in a non-

fiduciary capacity) as to any matter pertaining to the Plan; *provided, however*, that any Plan amendment or termination or any other action that reasonably could be expected to increase materially the cost of the Plan must be approved by the Board.

11. **Eligibility to Participate.** To the extent that the Administrator has delegated administrative authority or responsibility to one or more officers of the Company in accordance with Sections 2.2 and 10, each such officer will not be excluded from participating in the Plan if otherwise eligible, but he or she is not entitled to act upon or make determinations regarding any matters pertaining specifically to his or her own benefit or eligibility under the Plan. The Administrator will act upon and make determinations regarding any matters pertaining specifically to the benefit or eligibility of each such officer under the Plan.

12. **Term.** The Plan will become effective upon the Effective Date. In the event that, on or prior to December 31, 2021 (the “**Outside Date**”), (i) a Change in Control occurs, or (ii) the Company enters into a definitive agreement which, if consummated, would result in a Change in Control (“**Potential Change in Control**”), and such Potential Change in Control results in a Change in Control, the Plan will terminate automatically upon the completion of all payments (if any) under the terms of the Plan. In the event that, a Potential Change in Control is pending as of the Outside Date and is subsequently abandoned (as publicly announced by the Company), the Plan will terminate automatically effective as of the date that such Potential Change in Control is abandoned. In the event that a Change in Control does not occur prior to the Outside Date, and a Potential Change in Control is not pending as of the Outside Date, the Plan will terminate automatically effective as of January 1, 2022.

13. **Amendment or Termination.** The Company, by action of the Administrator, reserves the right to amend or terminate the Plan at any time, without advance notice to any Eligible Employee and without regard to the effect of the amendment or termination on any Eligible Employee or on any other individual. Any amendment or termination of the Plan will be in writing. Notwithstanding the foregoing, during the pendency of a Potential Change in Control and on and following a Change in Control, the Company may not, without an Eligible Employee’s written consent, amend or terminate the Plan in any way, nor take any other action, that (i) prevents that Eligible Employee from becoming eligible for the Severance Benefits under the Plan, or (ii) reduces or alters to the detriment of the Eligible Employee the Severance Benefits payable, or potentially payable, to an Eligible Employee under the Plan (including, without limitation, imposing additional conditions).

#### 14. **Claims and Appeals.**

14.1 **Claims Procedure.** Any Eligible Employee or other person who believes he or she is entitled to any payment under the Plan may submit a claim in writing to the Administrator within ninety (90) calendar days of the earlier of (i) the date the claimant learned the amount of his or her benefits under the Plan or (ii) the date the claimant learned that he or she will not be entitled to any benefits under the Plan. If the claim is denied (in full or in part), the claimant will be provided a written notice explaining the specific reasons for the denial and referring to the provisions of the Plan on which the denial is based. The notice also will describe any additional information needed to support the claim and the

Plan's procedures for appealing the denial. The denial notice will be provided within ninety (90) calendar days after the claim is received. If special circumstances require an extension of time (up to ninety (90) calendar days), written notice of the extension will be given within the initial ninety (90) day period. This notice of extension will indicate the special circumstances requiring the extension of time and the date by which the Administrator expects to render its decision on the claim.

14.2 **Appeal Procedure.** If the claimant's claim is denied, the claimant (or his or her authorized representative) may apply in writing to the Administrator for a review of the decision denying the claim. Review must be requested within sixty (60) calendar days following the date the claimant received the written notice of their claim denial or else the claimant loses the right to review. The claimant (or representative) then has the right to review and obtain copies of all documents and other information relevant to the claim, upon request and at no charge, and to submit issues and comments in writing. The Administrator will provide written notice of its decision on review within sixty (60) calendar days after it receives a review request. If additional time (up to sixty (60) calendar days) is needed to review the request, the claimant (or representative) will be given written notice of the reason for the delay. This notice of extension will indicate the special circumstances requiring the extension of time and the date by which the Administrator expects to render its decision. If the claim is denied (in full or in part), the claimant will be provided a written notice explaining the specific reasons for the denial and referring to the provisions of the Plan on which the denial is based. The notice also will include a statement that the claimant will be provided, upon request and free of charge, reasonable access to, and copies of, all documents and other information relevant to the claim and a statement regarding the claimant's right to bring an action under Section 502(a) of ERISA.

15. **Attorneys' Fees.** The parties shall each bear their own expenses, legal fees and other fees incurred in connection with the Plan.

16. **Source of Payments.** All Severance Benefits will be paid in cash from the general funds of the Company; no separate fund will be established under the Plan, and the Plan will have no assets. No right of any person to receive any payment under the Plan will be any greater than the right of any other general unsecured creditor of the Company.

17. **Inalienability.** In no event may any current or former employee of the Company or any of its subsidiaries or affiliates sell, transfer, anticipate, assign or otherwise dispose of any right or interest under the Plan. At no time will any such right or interest be subject to the claims of creditors nor liable to attachment, execution or other legal process.

18. **No Enlargement of Employment Rights.** Neither the establishment or maintenance or amendment of the Plan, nor the making of any benefit payment hereunder, will be construed to confer upon any individual any right to continue to be an employee of the Company. The Company expressly reserves the right to discharge any of its employees at any time, with or without cause. However, as described in the Plan, an Eligible Employee may be entitled to benefits under the Plan depending upon the circumstances of his or her termination of employment.

19. **Successors.** Any successor to the Company of all or substantially all of the Company's business and/or assets (whether direct or indirect and whether by purchase, merger, consolidation, liquidation or other transaction) will assume the obligations under the Plan and agree expressly to perform the obligations under the Plan in the same manner and to the same extent as the Company would be required to perform such obligations in the absence of a succession. For all purposes under the Plan, the term "Company" will include any successor to the Company's business and/or assets which become bound by the terms of the Plan by operation of law, or otherwise.

20. **Applicable Law.** The provisions of the Plan will be construed, administered and enforced in accordance with ERISA and, to the extent applicable, the internal substantive laws of the state of New York (but not its conflict of laws provisions).

21. **Severability.** If any provision of the Plan is held invalid or unenforceable, its invalidity or unenforceability will not affect any other provision of the Plan, and the Plan will be construed and enforced as if such provision had not been included.

22. **Headings.** Headings in the Plan document are for purposes of reference only and will not limit or otherwise affect the meaning hereof.

**Appendix A**

**CVR Energy, Inc. Change in Control and Severance Plan  
Eligible Employees**

- Executive Vice President & Chief Financial Officer
- Executive Vice President & Chief Commercial Officer
- President and CEO – CVR Partners & Executive Vice President – Corporate Services
- Executive Vice President, General Counsel & Secretary
- Chief Accounting Officer and Corporate Controller
- Vice President Tax
- Vice President Finance
- Sr. Vice President Marketing and Feedstocks
- Sr. Vice President Crude
- Vice President IT & Chief Information Officer
- Vice President Human Resources

**Appendix B**

**CVR Energy, Inc. Change in Control and Severance Plan  
Form of Participation Agreement**

CVR Energy, Inc. (the “Company”) is pleased to inform you, \_\_\_\_\_, that you have been selected to participate in the Company’s Change in Control and Severance Plan, as may be amended from time to time (the “Plan”). A copy of the Plan was delivered to you with this Participation Agreement. Your participation in the Plan is subject to all of the terms and conditions of the Plan.

In order to become a participant in the Plan (an “Eligible Employee” as described in the Plan), you must complete and sign this Participation Agreement and return it to [NAME] no later than [DATE].

The Plan describes in detail certain circumstances under which you may become eligible for Severance Benefits. As described more fully in the Plan, you may become eligible for certain Severance Benefits under Sections 4.1 and 4.2 of the Plan if, during the Change in Control Period, you experience an Involuntary Termination (as defined in the Plan), or if you experience a Change In Control Related Termination.

In order to receive and/or retain any Severance Benefits for which you otherwise become eligible under the Plan, you must sign and deliver to the Company the Release, which must have become effective and irrevocable within the requisite period, and you must also adhere to the confidentiality, non-disparagement, non-competition and non-solicitation provisions of the Plan as set forth in the Plan. Also, as explained in the Plan, your Severance Benefits (if any) may be reduced under certain circumstances, if necessary, to avoid your Severance Benefits from becoming subject to “golden parachute” excise taxes under the Internal Revenue Code.

By your signature below, you and the Company agree that your participation in the Plan is governed by this Participation Agreement and the provisions of the Plan. Your signature below confirms that: (1) you have received a copy of the Change in Control and Severance Plan; (2) you have carefully read this Participation Agreement and the Change in Control and Severance Plan; (3) you agree to comply with the restrictive covenants set forth in Sections 6.2 and 6.3 of the Plan and the terms of any other confidentiality, proprietary information and inventions agreement, including any non-competition and non-solicitation covenants contained therein; and (4) decisions and determinations by the Administrator under the Plan will be final and binding on you and your successors.

[Signature Page Follows]

**CVR ENERGY, INC.**

**[ELIGIBLE EMPLOYEE NAME]**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title

Attachment: CVR Energy, Inc. Change in Control and Severance Plan

*[Signature Page to the Participation Agreement]*

## **CVR Energy, Inc.**

### **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 employees of the Company and its subsidiaries, excluding CVR Refining, LP (“CVRR”), CVR Partners, LP (“UAN”), their respective general partners and their respective subsidiaries (references to “employees” within this Plan are references to all employees of the foregoing entities).

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 Officer the authority to approve payouts from such total bonus pool to employees in Grade 13 and below, in his sole discretion. The Chief Executive Officer 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 E11 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 E12 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 Tier 1 Events Incident Rate (PSIR); and
- Environmental Events (EE) - Number of “numerical” releases, spills, permit exceedances and violations.

#### **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 below E08 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**

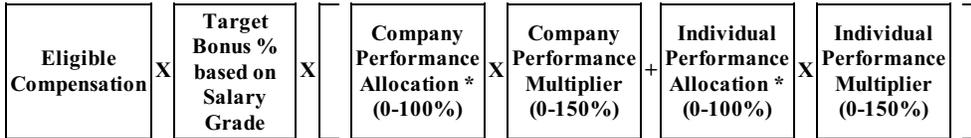
Supervisor's assessment of employee's performance will be based on the following categories:

- 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**

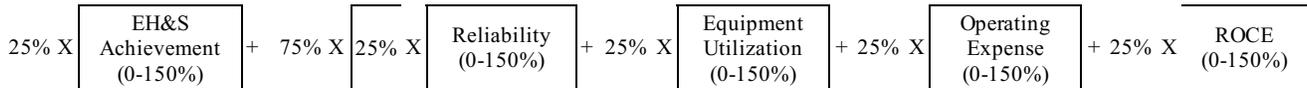
**Bonus Payout Calculation:**



\*Company Performance Allocation + Individual Performance Allocation = 100%

Allocations are based on employee salary grade

**\*\*Company Performance Multiplier:**



**Appendix C  
Bonus Payout Examples**

Example Bonus Calculation 1:											
Salary Grade	E12										
Eligible Compensation	\$196,000	<b>Eligible Compensation</b>		<b>Bonus Target %</b>		<b>Co. Perf. Alloc</b>		<b>Co. Perf. Multiplier</b>		<b>Ind. Perf. Alloc.</b>	<b>Ind. Perf. Multiplier</b>
Performance Rating	Exceeds										
Bonus Target %	40%	\$ 196,000	X	40%	X (	50%	X	110%	+	50%	X 125% )
Company Performance Allocation	50%										
Company Performance Multiplier (0-150%)	110%			= \$ 92,120							
Individual Performance Allocation	50%										
Individual Performance Multiplier (0-150%)	125%										
Example Bonus Calculation 2:											
Salary Grade	E06										
Eligible Compensation	\$90,000	<b>Eligible Compensation</b>		<b>Bonus Target %</b>		<b>Ind. Perf. Alloc.</b>		<b>Ind. Perf. Multiplier</b>			
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 2:											
Hourly Non-Represented	Hrly Non-Rep										
Eligible Compensation	\$ 70,000	<b>Eligible Compensation</b>		<b>Bonus Target %</b>		<b>Co. Perf. Alloc.</b>		<b>Co. Perf. Multiplier</b>			
Performance Rating	None	\$ 70,000	X	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.

**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), weighted based upon Budgeted Adjusted EBITDA for the Period.

**Appendix E**  
**CVR Refining, LP and 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)**

Increase in Incident Rate or Incidents
0%
Decrease > 0% and < 3%
Decrease of 3%
Decrease > 3% and < 10%
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

**Bonus Achievement**

Zero
50% of Target Percentage (Threshold)
Linear Interpolation between Threshold and Target
Target Percentage
Linear Interpolation between Target and Maximum
150% of Target (Maximum)

Financial Measures (75%)

Four measures evenly weighted (25% each):

**Reliability**

Greater than 9.0%
9.00%
7.01% to 8.99%
7.00%
6.0% to 6.99%
Less than 6.0%

**Bonus Achievement**

Zero
50% of Target Percentage (Threshold)
Linear Interpolation between Threshold and Target
Target Percentage
Linear Interpolation between Target and Maximum
150% of Target (Maximum)

**Equipment Utilization**

Less than 95%
95%
95.01% to 99.99%
100%
100.01% to 104.99%
Greater than 105%

**Bonus Achievement**

Zero
50% of Target Percentage (Threshold)
Linear Interpolation between Threshold and Target
Target Percentage
Linear Interpolation between Target and Maximum
150% of Target (Maximum)

**Operating Expense**

Greater than 103.0%
103%
100.1% to 102.99%
100%
95.0% to 99.99%
Less than 95%

**Bonus Achievement**

Zero
50% of Target Percentage (Threshold)
Linear Interpolation between Threshold and Target
Target Percentage
Linear Interpolation between Target and Maximum
150% of Target (Maximum)

**CVRR ROCE (Ranking vs. Peer Group\*)**

First (highest)
Second
Between Second and Target
Average of Fourth and Fifth
Between Target and Seventh
Seventh
Eighth

**Bonus Achievement**

150% of Target (Maximum)
125% of Target Percentage
Linear Interpolation between 100% and 125%
Target Percentage (100%)
Linear Interpolation between 50% and 100%
50% of Target Percentage (Minimum)
Zero

**UAN ROCE (Ranking vs. Peer Group\*\*)**

First (highest)
Second
Third
Fourth
Fifth
Sixth
Seventh

**Bonus Achievement**

150% of Target (Maximum)
125% of Target Percentage
112.5% of Target Percentage
Target Percentage (100%)
75% of Target Percentage
50% of Target Percentage (Minimum)
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 Andeavor, 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 earnings before interest, taxes, depreciation and amortization, and adjusted for first-in, first-out accounting impacts, unrealized gains and losses on derivative transactions, turnaround expenses, loss on extinguishment of debt, asset impairment charges, non-controlling interest and board-directed actions.

**“Adjusted EBITDA Threshold”** means actual capital expenditures plus reserves for major scheduled turnaround expenses plus interest on debt for the given Performance Period. In Performance Periods that include a turnaround, Adjusted EBITDA Threshold will equal capital expenditures plus total turnaround spend less established turnaround reserves (excluding reserves added in current period) plus interest on debt. [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.
  - o Reportable quantity is an event or contemporaneous combination of events during a 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.
  - o 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.
  - o 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.
  - o 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 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 quarter end balances).

**“Capital Employed”** means the sum of debt plus shareholders’ equity less cash and marketable securities less intangible assets less goodwill.

**“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.

AMENDMENT TO  
PERFORMANCE UNIT AGREEMENT

This AMENDMENT TO PERFORMANCE UNIT AGREEMENT (this “Amendment”) is made and entered into as of September 17, 2018, by and between CVR Energy, Inc., a Delaware corporation (the “Company”) and David L. Lamp (the “Grantee”).

The Company and the Grantee are parties to a Performance Unit Agreement dated as of November 1, 2017 (the “Agreement”). The parties hereto desire to amend the Agreement as provided herein.

1. Performance Conditions. Section 2(a) of the Agreement is hereby deleted in its entirety and replaced with the following:

“(a) With respect to the Award, during the period beginning on January 1, 2018 and ending on December 31, 2018 (the “Performance Cycle”), the following performance conditions (each, a “Performance Objective”) will be applied to determine the applicable Performance Factor (as set forth below):

- a. 25% of the Performance Units attributable to the Award will be subject to the environmental, health and safety measures specified in the CVR Energy, Inc. Performance-Based Bonus Plan; and
- b. 75% of the Performance Units attributable to the Award will be subject to the financial measures specified in the CVR Energy, Inc. Performance-Based Bonus Plan.

The Performance Factor will range from 0-150% in accordance with each Performance Objective as measured pursuant to the CVR Energy, Inc. Performance-Based Bonus Plan.”

2. Ratify Agreement. Except as expressly amended hereby, the Agreement will remain unamended and in full force and effect in accordance with its terms. The amendments provided herein will be limited precisely as drafted and will not constitute an amendment of any other term, condition or provision of the Agreement.

3. Cross References. References in the Agreement to “Agreement”, “hereof”, “herein”, and words of similar import are deemed to be a reference to the Agreement as amended by this Amendment.

4. Counterparts. This Amendment may be executed in any number of counterparts, each of which will be deemed to be an original and all of which constitute one agreement that is binding upon each of the parties, notwithstanding that all parties are not signatories to the same counterpart.

[signature page follows]

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The parties have executed this Amendment as of the date first written above.

CVR ENERGY, INC.

GRANTEE

/S/ Melissa M. Buhrig

/S/ David L. Lamp

By: Melissa M. Buhrig

Name: David L. Lamp

Title: Executive Vice President  
General Counsel & Secretary

[Signature Page for Amendment to Performance Unit Agreement]

**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 officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

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

Date: October 25, 2018

**Certification of Executive Vice President and Chief Financial 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, Tracy D. Jackson, 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 officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By: /s/ TRACY D. JACKSON

Tracy D. Jackson

*Executive Vice President and Chief Financial Officer  
(Principal Financial Officer)*

Date: October 25, 2018

**Certification of 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, Matthew W. Bley, 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 officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ MATTHEW W.  
By: BLEY  
Matthew W. Bley  
*Chief Accounting  
Officer and Corporate  
Controller  
(Principal Accounting  
Officer)*

Date: October 25, 2018

**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 September 30, 2018, 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/ TRACY D. JACKSON  
Tracy D. Jackson  
*Executive Vice President and Chief*  
*Financial Officer*  
*(Principal Financial Officer)*

By: /s/ MATTHEW W. BLEY  
Matthew W. Bley  
*Chief Accounting Officer and Corporate*  
*Controller*  
*(Principal Accounting Officer)*

Dated: October 25, 2018