

## **January 2020 IR Presentation**

## **Forward-Looking Statements**





This presentation contains forward-looking statements ("FLS") which are protected as FLS under the PSLRA, and which are based on management's current expectations and beliefs, as well as a number of assumptions concerning future events. The assumptions and estimates underlying FLS are inherently uncertain and are subject to a wide variety of significant business and economic uncertainties and competitive risks that could cause actual results to differ materially from those contained in the prospective information. Accordingly, there can be no assurance we will achieve the future results we expect or that actual results will not differ materially from expectations. Statements concerning current estimates, expectations and projections about future results, performance, prospects, opportunities, plans, actions and events and other statements, concerns, or matters that are not historical facts are FLS and include, but are not limited to, statements regarding future: crude oil capacities; access to crude oil and condensate fields; EBITDA and capacities of our logistics assets; crude oil and condensate production, quality, pricing, price advantages and gathering; pipeline access; fertilizer distribution costs, netback pricing (and maximization thereof), marketing agreements and utilization rates; access to crude oils and shale oils; complexity; optionality of our marketing network; blending and RIN generation; product mix; conversion and distillate yields; strategic value of our locations; cost of operations; throughput and production; favorability of the macro environment including increased shale oil production, takeaway capacity, price advantages, product demand, growth of global economies sustainably or at all, price environment, impacts of IMO 2020 including the ability of CVR Energy, Inc. ("CVI", "CVR Energy", or the "Company") to benefit therefrom, exports, unemployment, Renewable Identification Number ("RIN") prices, deregulation and energy developments; crude oil and condensate differentials; crack spreads; diesel demand and gasoline production; demand for light sweet and heavy sour crude oil; exposure to Brent/WTI differential; liquid volume yield; impacts of Tier 3 including sulfur credit pricing, premium/subgrade spreads, octane value, ability of our refineries to comply with sulfur specifications and the impact of our capital projects; dividends and balance sheet strength; strategic initiatives including EHS improvements, RINs exposure, biodiesel blending, development of wholesale or retail businesses, expansion of optionality to process WCS, light shale oil and/or natural gasoline, liquid yield improvement at Wynnewood by 3.5% or at all, reduction of lost opportunities and capture rates; capital expenditures, turnaround expense and turnaround timing and activities; the crude optionality, Isom and HF mitigation projects including the costs, timing, returns, benefits and impacts thereof; global and domestic nitrogen demand and consumption; population growth; amount of arable farmland; biofuels consumption; diet evolution; product pricing and capacities; logistics optionality; rail access and delivery points; sustainability of production; demand growth and supply/demand imbalance; corn demand, stocks, uses, pricing, consumption, production, planting and yield; continued safe and reliable operations; and other matters.

You are cautioned not to put undue reliance on FLS (including forecasts and projections regarding our future performance) because actual results may vary materially from those expressed or implied as a result of various factors, including, but not limited to those set forth under "Risk Factors" in the Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and any other filings with the Securities and Exchange Commission by CVR Energy, Inc. ("CVI") or CVR Partners, LP ("UAN"). These FLS are made only as of the date hereof. Neither CVI nor UAN assume any obligation to, and they expressly disclaim any obligation to, update or revise any FLS, whether as a result of new information, future events or otherwise, except as required by law.

#### **Non-GAAP Financial Measures**

Certain financial information in this presentation (including EBITDA, Adjusted EBITDA) are not presentations made in accordance with U.S. Generally Accepted Accounting Principles ("GAAP") and use of such terms varies from others in the same industry. Non-GAAP financial measures should not be considered as alternatives to income from continuing operations, income from operations or any other performance measures derived in accordance with GAAP. Non-GAAP financial measures have important limitations as analytical tools, and you should not consider them in isolation or as substitutes for results as reported under GAAP. This presentation includes a reconciliation of certain non-GAAP financial measures to the most directly comparable financial measures calculated in accordance with GAAP.

### **Mission and Values**



### **Our Guiding Principles**

**Our mission is** to be a top-tier North American petroleum refining and nitrogen-based fertilizer company as measured by safe and reliable operations, superior financial performance and profitable growth.

**Our core values** define the way we do business every day to accomplish our mission. The foundation of our company is built on these core values. We are responsible to apply our core values in all the decisions we make and actions we take.



### **Safety -** We always put safety first.

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



### **Environment -** We care for our environment.

Complying with all regulations and minimizing any environmental impact from our operations is essential. We understand our obligation to the environment and that it's our duty to protect it.



### **Integrity -** We require high business ethics.

We comply with the law and practice sound corporate governance. We only conduct business one way – the right way with integrity.



### **Corporate Citizenship** - We are proud members of the communities where we operate.

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



### **Continuous Improvement -** We foster accountability under a performance-driven culture.

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

## **Company Overview**



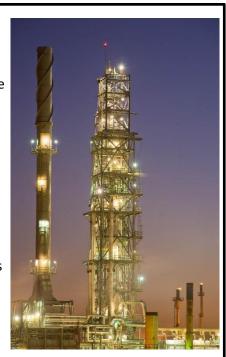
### Mid-Continent Focused Refining & Fertilizer Businesses

**CVR Energy** is a diversified holding company primarily engaged in the petroleum refining and nitrogen fertilizer manufacturing industries. CVR Energy's Petroleum segment is the larger of the two businesses and is comprised of two Mid-Continent complex refineries and associated logistics assets. Our Nitrogen Fertilizer business is comprised of our ownership of the general partner and 34 percent of the common units of CVR Partners, LP.

### Petroleum Segment



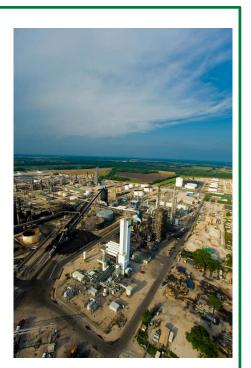
- 2 strategically located Mid-Continent refiners close to Cushing, Oklahoma
- 206,500 bpd of nameplate crude oil capacity
- Direct access to crude oil and condensate fields in the Anadarko Basin
- Complimentary logistic assets with potential EBITDA of approximately \$70 million per year
- Historical space on key pipelines provides access to quality and price advantaged crude oil – 100% exposure to WTI-Brent differential
- ▶ 97% liquid volume yield & 42% distillate yield<sup>(1)</sup>



## Fertilizer Segment



- CVI owns the general partner and 34% of the common units of CVR Partners, LP (NYSE: UAN)
- 2 strategically located facilities serving the Southern Plains and Corn Belt
- Well positioned to minimize distribution costs and maximize net back pricing
- Consistently maintained high utilization rates at production facilities
- Marketing agreement with LSB Industries Pryor, OK, facility's UAN production



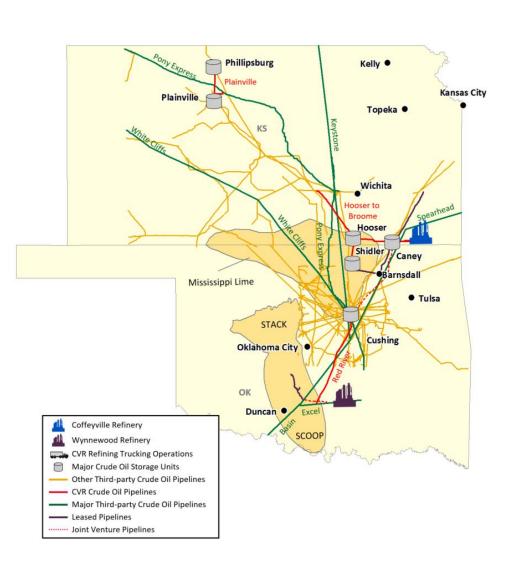


## **PETROLEUM SEGMENT**

## **Asset Footprint**

# **Energy**

### **Strategically Located Assets near Cushing and SCOOP/STACK**



### **Mid-Continent Refineries**

Nameplate crude oil capacity of 206,500 bpd across two refineries

3Q19 total throughput of 222,000 bpd

Average complexity of 10.8

Located in Group 3 of PADD II

### **Cushing & SCOOP/STACK Centric**

Refineries are strategically located ~ 100 to 130 miles from Cushing, OK

Historical space on key pipelines

Access to domestic conventional and locally gathered shale oils and Canadian crude oils

### **Logistics**

Crude oil gathering system with access to over 250,000 bpd of production across Kansas, Nebraska, Oklahoma and Missouri

 3Q19 SCOOP/STACK gathering increased 20% Y/Y as we increased focus on these high quality crude oils

Logistics asset portfolio includes over 430 miles of owned or JV pipelines, over 7 million barrels of total crude oil and product storage capacity and 39 LACT units

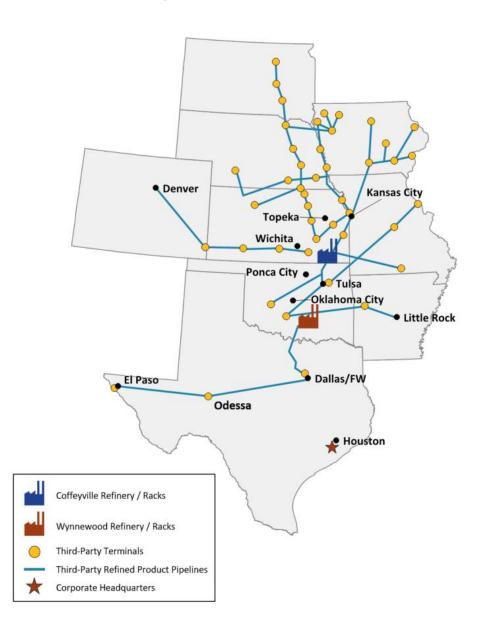
## **Strategically Located Mid-Con Refineries**



### **Multiple Takeaway Options Provide Product Placement Flexibility**

### **Marketing Network Optionality**

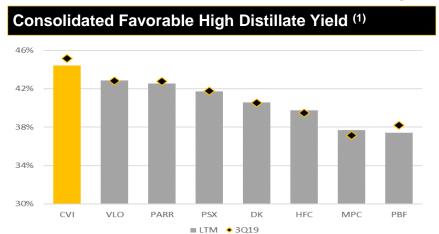
- Marketing activities focused in central midcontinent area via rack marketing, supplying customers nearby and at terminals on thirdparty distribution systems
  - Rack marketing enables the sale of blended products, allowing CVR to capture the RIN
- Majority of refined volumes flow north on Magellan system or NuStar pipelines
- Flexibility to ship product south into Texas markets as well
- Over 100 product storage tanks with shell capacity of over 4 million barrels across both refineries



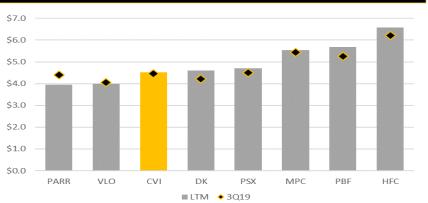
## **High-Quality Refining Assets**

# **Energy**

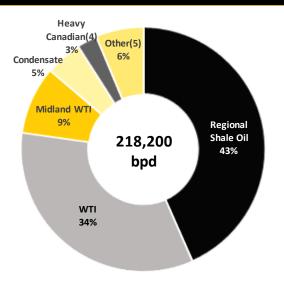
## **Favorable Product Mix and Low-Cost Operations**



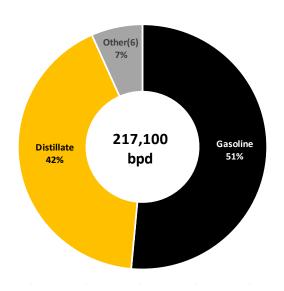
## Consolidated Low Cost Operator<sup>(2) (3)</sup>



### Total Throughput(2)



### Total Production<sup>(2)</sup>



- (1) Based on crude oil throughputs
- 2) Based on total throughputs for the last twelve months ended September 30, 2019
- (3) Operating expenses based on per barrel of total throughput
- 4) Currently have pipeline space up to 35,000 bpd but has historically been more economic to sell heavy crude oils in Cushing, Oklahoma
- (5) Other includes natural gasoline, isobutane, normal butane and gas oil
- (6) Other includes pet coke, NGLs, slurry, sulfur and gas oil, and specialty products such as propylene and solvents; excludes internally produced fuels

### **Favorable Macro Environment**



### **Supply and Demand Fundamentals Supportive of Constructive Outlook**



### **Feedstock Supply**

- Increasing U.S. shale oil production
- Limited Canadian pipeline and rail takeaway capacity
- Access to price-advantaged crude oils such as Canadian and Regional Shales



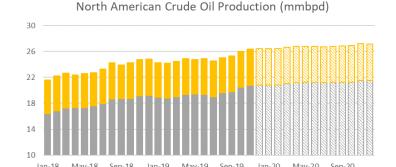
### **Product Demand**

- Global economies aligned for sustainable growth
- Sustained product demand driven by:
  - Lower price environment
     Tier 3 Gasoline
  - IMO 2020 Exports Low Unemployment



## Regulatory Landscape

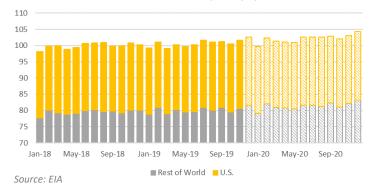
- Constructive deregulation
- Positive Energy development in the U.S.
- Lower Y/Y RIN prices
   Continued granting of SREs



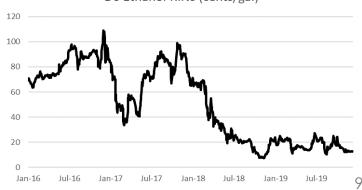
■ U.S. Canada



Source: EIA







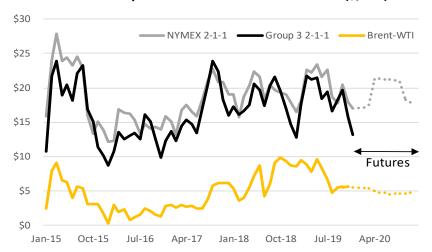
## **Favorable Macro Environment**



### Forward Crack Spreads and Crude Differentials Remain Attractive

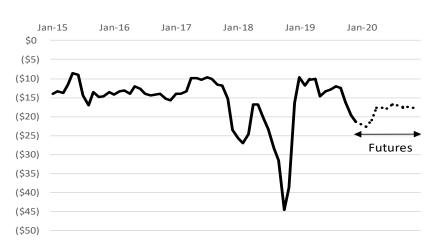
### 2-1-1 Crack Spreads & Brent-WTI Differentials (\$/bbl)

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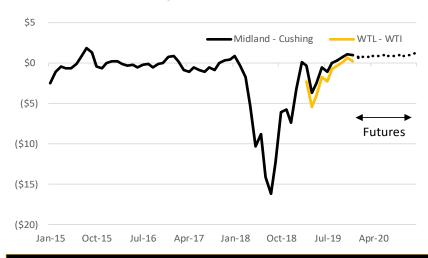
### WCS - WTI Differential (\$/bbl)

#### WCS-WTI Differential (\$/bbl)



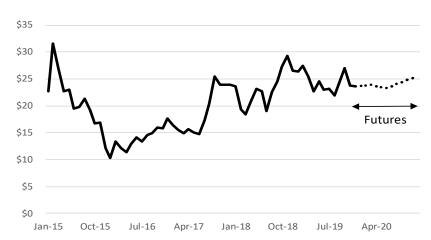
### Midland-Cushing and WTL-WTI Differentials (\$/bbl)

#### Midland-Cushing & WTL-WTI Differentials (\$/bbl)



### WTI-Based ULSD Crack Spread (\$/bbl)

#### WTI-based ULSD Crack (\$/bbl)



Source: Market view as of December 31, 2019

## Well Positioned to Benefit from IMO 2020 & Tier 3 Gasoline Fi



### New Regulatory Standards Should Represent Tailwinds for CVR Energy

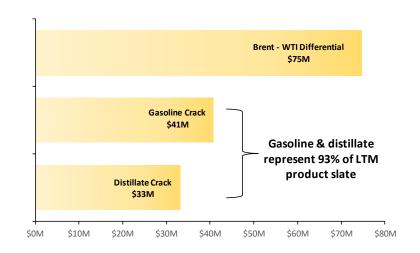
### **IMO 2020 Should be a Net Positive for the Industry**

**Background:** Beginning January 1, 2020 the International Maritime Organization (IMO) is expected to enforce a new 0.5% global sulfur cap on marine fuel content, a significant reduction from the current limit of 3.5%.

**Expected Market Impacts:** 1) Increased demand for diesel, 2) decreased gasoline production as refiners shift gasoline feedstock to low-sulfur marine fuel oil production, 3) increased demand for light sweet crude oil, and 4) decreased demand for heavy sour crude.

Implications for CVR Energy: CVR Energy is well positioned to benefit from IMO 2020 impacts due to: 1) Peer-leading distillate yield of over 44% over the last twelve months<sup>(1)</sup>, 2) 100% exposure to the Brent – WTI differential, and 3) high liquid volume yield of light products.

### Annual EBITDA Sensitivity from \$1/bbl change<sup>(2)</sup>



### **CVR Energy is Prepared to Meet Tier 3 Gasoline Specifications**

**Background:** Also beginning January 1, 2020 all refineries will be required to meet the Tier 3 gasoline specifications requiring gasoline production to meet an annual 10 ppm average sulfur content. Refineries that have not invested in the hardware necessary to meet the specifications will be required to purchase sulfur credits to comply.

**Expected Market Impacts**: 1) Increase in the price of sulfur credits, 2) increase in the value of octane, widening the spread of premium gasoline over subgrade.

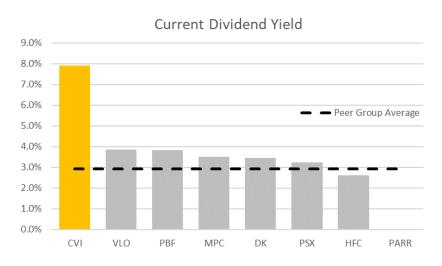
**Implications for CVR Energy:** CVR Energy currently produces 10ppm sulfur max gasoline at Wynnewood and has the capability to reduce the sulfur content at Coffeyville to meet Tier 3 specifications in 2020. In addition, several of the capital projects currently under evaluation (Coffeyville Crude Optionality, Wynnewood Isomerization Unit, Wynnewood HF Mitigation project) should all benefit from the potential widening of premium gasoline spreads resulting from Tier 3 specifications.

## **Industry Leading Dividend Yield & Leverage**

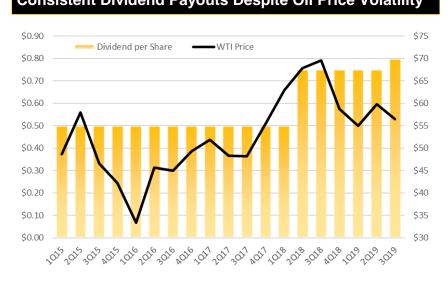


### **Best in Class Dividend and Balance Sheet**

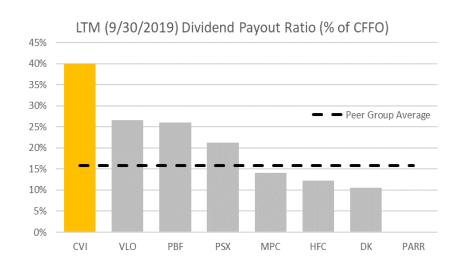
### Current Dividend Yield<sup>(1)</sup> over 2x Peer Group Average



## Consistent Dividend Payouts Despite Oil Price Volatility



### Dividend Payout Ratio Also >2x Peer Average



### Peer-Leading Leverage Position<sup>(1)</sup>



(1) Based on closing prices on December 31, 2019

## **Strategic Initiatives**



### Focus on Maximizing Reliability, Increasing Feedstock Flexibility & Premium Production

## **Environmental, Health and Safety**

### Continue to improve in all Environmental, Health and Safety matters. Safety is Job 1

✓ 2019 total recordable incident rates declined 13% Y/Y, following a reduction of over 50% in 2018

### Focus on Crude Quality & Differentials

## Leverage our strategic location and our proprietary gathering system to deliver high quality and cost-efficient crude oil to our refineries

✓ Increased 3Q19 SCOOP gathering by over 20% Y/Y as we eliminated activity in other non-strategic regions. Gathering approx. 150,000 bpd in the SCOOP, working toward 200,000 bpd goal

## Reduce our RIN Exposure

## Reduce our RIN exposure through increased biodiesel blending and building a wholesale/retail business

✓ Internal RINs generation increased to 22% for 2019, an increase of 25% since the beginning of '18, in part by blending biodiesel across both refinery racks and selling more aviation fuel

## **Expand Coffeyville Feedstock Flexibility**

## Expand our optionality to process additional light shale oil, condensate and natural gasoline at the Coffeyville refinery

✓ Project under development; potential capital investment of \$200M if approved, with expected returns over 40%

### Increase Liquid Yields at Wynnewood

#### Improve liquid yield recovery at the Wynnewood refinery by 3.5%

✓ Benfree repositioning project placed in service 1Q19. Board recently approved Isomerization project; expected capital investment of \$117M with expected returns over 40%.

## Reduce Lost Opportunities

#### Reduce lost opportunities and improve capture rates

✓ Lost profit opportunities through September 2019 were less than 4% of gross margin, well below 2018 levels of approximately 7%

## **Long-Term Value Creation Projects**



### Increase Feedstock Flexibility & Improve Liquid Yield at Coffeyville

## **Crude Optionality at Coffeyville**

If approved, this project would increase Coffeyville's capacity to run natural gasoline to 10,000 bpd and/or increase light shale crude oil and condensate processing

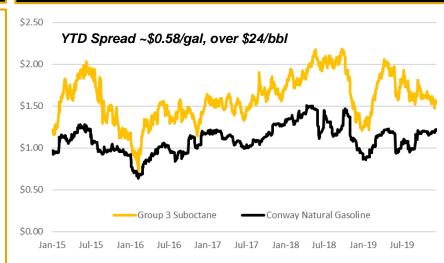
- Additional naphtha hydrotreating capacity
- Additional C5 / C6 isomerization capacity
- Create Tier III gasoline flexibility / premium production

Schedule A engineering design is complete and now finalizing detailed cost estimate

Timing for completion is expected to be in 2022-2023

Total capital cost currently estimated at approximately \$200 million

### **Group 3 Gasoline vs. Conway Natural Gasoline (\$/gal)**



The impact of Tier 3 Gasoline specs on this spread in 2020 is yet to be determined

#### **Project Economics**

Total Capital Spend Estimate: \$200 million

Expected Internal Rate of Return: 40% or higher

Potential Annual EBITDA Uplift: \$80 million+(1)

## **Long-Term Value Creation Projects**



Increase Feedstock Flexibility & Improve Liquid Yield

## **Isomerization Unit at Wynnewood**

#### Intended to:

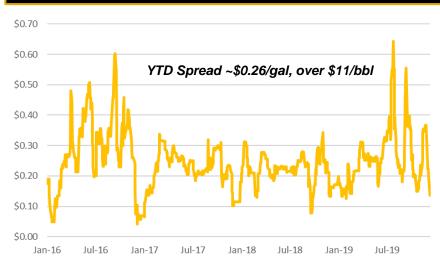
- Run more SCOOP/STACK light crude oils and condensates
- Improve liquid volume yield and increase distillate yield
- Increase capability to produce additional premium gasoline (typically >\$0.25/gal. uplift)
- Reduce benzene content of gasoline generate more credits

Schedule A design work is complete, including detailed engineering and equipment purchases

Achieved Board approval at the end of 2019, subject to continuing internal project approval processes

Project completion targeted for 2022

### Group 3 Premium Gasoline Spread over Subgrade (\$/gal)



### **Project Economics**

**Total Capital Spend Estimate: \$117 million** 

**Expected Internal Rate of Return: 40% or higher** 

Potential Annual EBITDA Uplift: \$34 million+(1)

## **Long-Term Value Creation Projects**



### **Environmental Mitigation Project with Liquid Yield Enhancement**

## **HF Mitigation Project at Wynnewood**

#### Intended to:

- Eliminate the use of hydrofluoric (HF) acid catalyst in the alkylation unit
- Also expected to increase liquid yield and production of premium gasoline at Wynnewood

HF mitigation alone would cost approximately \$36 million with no EBITDA uplift. Currently evaluating multiple technologies to replace the HF acid catalyst while also adding yield enhancements.

Expect to complete Schedule A engineering design in mid-2020

If approved, timing for project completion is expected to be in 2022

Potential to implement similar design at Coffeyville



### **Project Economics**

**Total Capital Spend Estimate: \$90 million** 

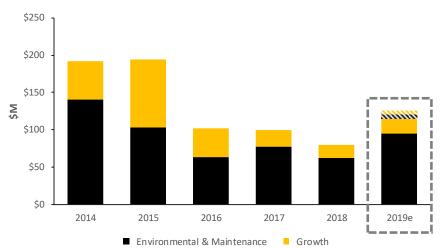
Expected Internal Rate of Return: 40% or higher on

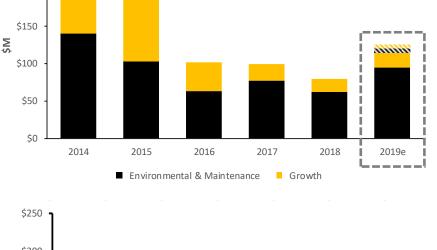
net spending of \$54 million

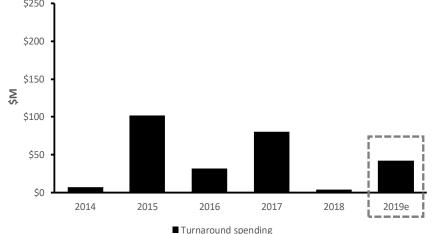
Potential Annual EBITDA Uplift: \$29 million+(1)

## **Capital Expenditures and Turnarounds**

### **Disciplined Approach to Capital Spending**







### 2019 Total Capex budget of \$115M - \$125M

**Environmental and Maintenance spending** planned at \$95M - \$100M

Growth capex budgeted at \$20M - \$25M

Approximately \$4M - \$8M of growth-related projects will require additional approvals before moving forward

### 2019 Turnaround spending planned at \$40M - \$45M

Wynnewood refinery turnaround completed as planned in 1Q19, on time and under budget

Coffeyville refinery turnaround expected in Spring of 2020 – FCC, alky and associated hydrotreating units

2019 budget includes some planning costs ahead of the 2020 turnaround

17 Note: As of September 30, 2019



## **FERTILIZER SEGMENT**

### Solid Trends in Fertilizer Demand Growth

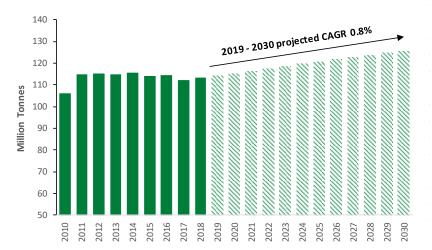
### **Global and Domestic Demand for Nitrogen Remains Strong**



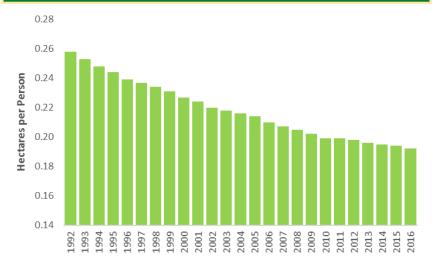
# Global nitrogen consumption increased by 15% between 2008 and 2018 driven by:

- Population growth
- Decrease in arable farmland per capita
- Biofuel consumption
- Continued evolution to more proteinbased diets in developing countries

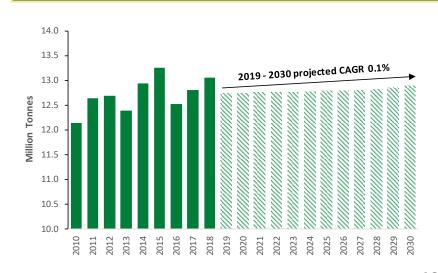
## Global Nitrogen Consumption



### **Global Arable Land per Capita**



### **US Nitrogen Consumption**



Source: Fertecon, World Bank

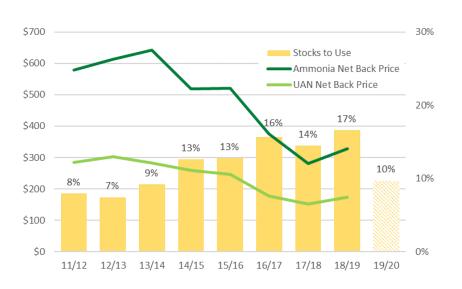
## **U.S Nitrogen Supply & Demand**

### **Supply and Demand Picture is More Balanced**



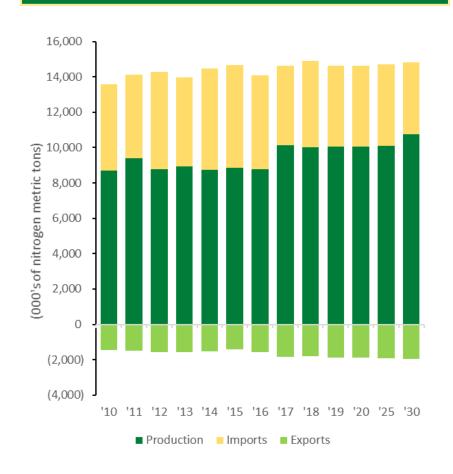
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#### Corn Stocks to Use Compared to Netback Fertilizer Pricing



- Nitrogen fertilizers represent approximately 15% of farmers' cost structure and significantly improves yields
- UAN prices increased \$37/ton, through the first nine months of 2019, or 22% Y/Y
- Major global nitrogen capacity build cycle largely complete in 2017/2018. Additional tons have been absorbed by the market
- Product demand currently expected to exceed new supply for the next several years

### **US Nitrogen Supply**



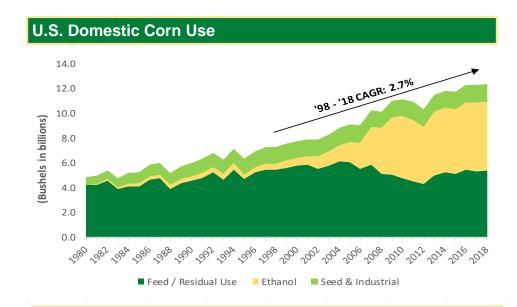
Source: NPK Fertilizer Consultant, USDA, Blue Johnson and Associates, Inc.

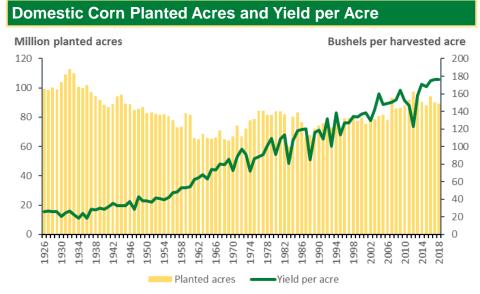
## Strong Demand for Corn in the U.S.

### **Increasing Corn Consumption is Positive for Nitrogen Demand**



- Corn has a variety of uses and applications, including feed grains, ethanol for fuel and food, seed and industrial (FSI)
- Feed grains
  - ~96% of domestic feed grains are supplied by corn
  - Consumes ~37% of annual corn crop<sup>(1)</sup>
- Ethanol
  - Consumes ~37% of annual corn crop<sup>(1)</sup>
- Corn production driven more by yield than acres planted
- Nitrogen is low on the cost curve for farmers





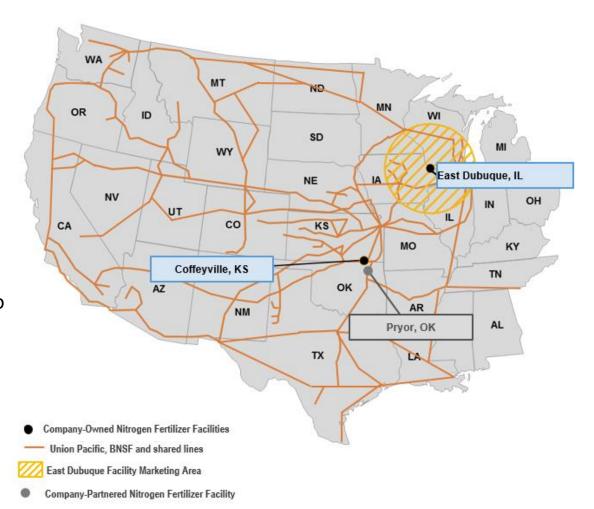
(1) Based on 2014 – 2018 average.

## **Strategically Located Assets**

### **Well-Positioned in Premium Pricing Regions**



- Large geographic footprint serving the Southern Plains and Corn Belt region
- Well positioned to minimize distribution costs and maximize net back pricing
- New rail loading rack at Coffeyville increases logistics optionality west of the Mississippi River due to access to both UP and BNSF delivery points
- Production sustainability due to storage capabilities at the plants and offsite locations
- Marketing agreement with LSB Industries Pryor, OK, facility's UAN production

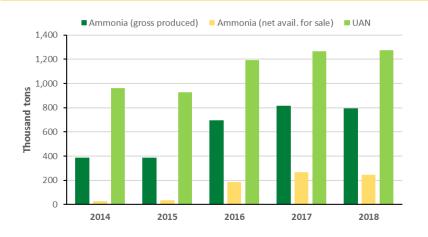


## **Key Operating Statistics**

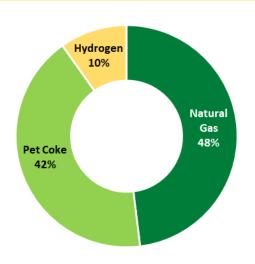
### **Consistent High Utilization at Both Facilities**



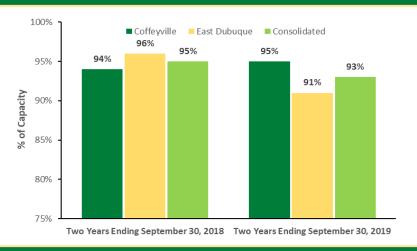
### **Consolidated Production Volumes**



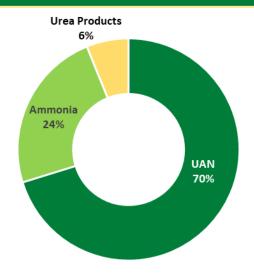
### Consolidated Feedstocks Costs<sup>(2)</sup>



### Ammonia Utilization<sup>(1)</sup>



### Consolidated Sales Revenue<sup>(2)(3)</sup>



<sup>(1)</sup> Adjusted by planned turnarounds.

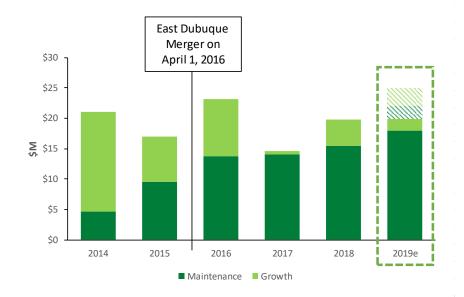
<sup>2)</sup> For the last twelve months ended September 30, 2019.

<sup>(3)</sup> Excludes freight.

## **Capital Expenditures and Turnaround Expenses**

### **Primarily Focused on Maintenance Spending**



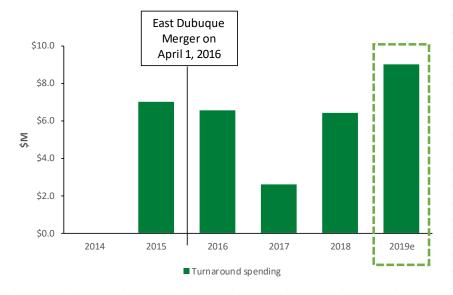


### 2019 Total Capex budget of \$20M - \$25M

Environmental and Maintenance spending planned at \$18M - \$20M

Growth capex budgeted at \$2M - \$5M

Growth capex budget comprised of a number of smaller projects



### 2019 Turnaround spending planned at \$9M

East Dubuque turnaround completed in October 2019

Coffeyville and East Dubuque are on alternating two-year turnaround schedules

Turnarounds have historically lasted two to three weeks and cost approximately \$7M

Note: As of June 30, 2019



## **APPENDIX**



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

**Adjusted EBITDA** as it relates only to our Fertilizer segment represents EBITDA adjusted to exclude consolidated turnaround expense and other non-recurring items which management believes are material to an investor's understanding of the Company's underlying operating results.

**Available Cash for Distribution** represents Adjusted EBITDA reduced for cash reserves established by the board of directors of CVR Partners, LP's general partner for (i) debt service, (ii) maintenance capital expenditures, (iii) 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 CVR Partners L.P.'s general partner.

**Direct Operating Expenses per Throughput Barrel** represents direct operating expenses for the Company's Petroleum segment divided by total throughput barrels for the period, which is calculated as total throughput barrels per day times the number of days in the period.

**Refining Margin** represents the difference between the Company's Petroleum segment net sales and cost of materials and other.

**Refining Margin adjusted for Inventory Valuation Impact** represents Refining Margin adjusted to exclude the impact of current period market price and volume fluctuations on crude oil and refined product inventories recognized in prior periods. The Company records its commodity inventories on the first-in-first-out basis. As a result, significant current period fluctuations in market prices and the volumes we hold in inventory can have favorable or unfavorable impacts on its refining margins as compared to similar metrics used by other publicly-traded companies in the refining industry.

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

Note: Due to rounding, numbers presented within this section may not add or equal to numbers or totals presented elsewhere within this document



(In USD Millions)

CVR Energy, Inc.	2015			016	2	2017	2	2018	4Q 2018		1Q 2019		2Q 2019		3Q 2019		LTM	
Net Income	\$	350	\$	10	\$	258	\$	366	\$	95	\$	102	\$	128	\$	104	\$	429
Add: Interest expense and other financing costs, net of interest income		47		83		109		102		23		26		26		26		101
Add: Income tax expense (benefit)		105		(19)		(220)		79		14		35		41		34		124
Add: Depreciation and amortization		199		229		258		274		71		67		78		71		287
EBITDA	\$	701	\$	303	\$	405	\$	821	\$	203	\$	230	\$	273	\$	235	\$	941

### Petroleum Segment

(In USD Millions, except per bbl data)

Refining Margin per throughput barrel	40	Q 2018	10	Q 2019	2	Q 2019	30	Q 2019	LTM	
Refining margin	\$	279	\$	317	\$	308	\$	334	\$	1,238
Divided by: total throughput barrels		20		19		20		20		80
Refining margin per throughput barrel	\$	13.79	\$	16.55	\$	15.66	\$	16.34	\$	15.55
Inventory valuation impacts	\$	77	\$	(32)	\$	-	\$	1	\$	46
Refining margin, excluding inventory valuation impacts		356		285		308		335		1,284
Divided by: total throughput barrels		20		19		20		20		80
Refining margin, excluding inventory valuations impacts, per throughput barrel	\$	17.62	\$	14.88	\$	15.68	\$	16.37	\$	16.12

Direct Operating Expense per throughput barrel	40	2018	<b>1</b> Q	2019	2	2Q 2019	3	3Q 2019	LTM
Direct operating expenses	\$	92	\$	91	\$	86	\$	91	\$ 364
Throughput (bpd)	2	221,481	2	12,806		216,283		222,000	218,177
Total Throughput (mm bbls)		20		19		20		20	80
Direct operating expenses per total throughput barrel	\$	4.45	\$	4.75	\$	4.40	\$	4.46	\$ 4.57



(In USD Millions)

CVR Partners, LP	2	2015		016	2	017	2	018	4Q	2018	1Q 2019	2Q 2019	3Q 2019		LTM
Net Income (loss)	\$	62	\$	(27)	\$	(73)	\$	(50)	\$	(1)	\$ (6)	\$ 19	\$	(23) \$	(12)
Add: Interest expense and other financing costs, net of interest income		7		49		63		63		16	16	16		16	63
Add: Income tax expense (benefit)		-		0		0		(0)		(0)	(0)	0		-	(0)
Add: Depreciation and amortization		28		58		74		72		19	17	25		18	78
EBITDA	\$	97	\$	80	\$	64	\$	84	\$	33	\$ 26	\$ 60	\$	11 \$	129
Add: Turnaround expenses		7		7		3		6		-	-	0		7	7
Add: Loss on extinguishment of debt		-		5		-		-		-	-	-		-	-
Add: Expenses associated with the East Dubuque Facility acquisition		2		3						-	-	-		-	
Adjusted EBITDA	\$	107	\$	95	\$	67	\$	90	\$	33	\$ 26	\$ 60	\$	18 \$	136

(In USD Millions)

CVR Partners, LP	20	015	20	016	2	017	20	18	4Q 2018		1Q 2019		2Q 2019	3Q 2019		LTM
Adjusted EBITDA	\$	107	\$	95	\$	67	\$	90	\$	33	\$	26	\$ 60	\$ :	18 \$	136
Less: Debt service		(6)		(46)		(60)		(59)		(15)	(	15)	(15)	(:	15)	(59)
Less: Maintenance capital expenditures		(10)		(14)		(14)		(15)		(4)		(3)	(1)		(7)	(15)
Less: Turnaround expenses		(7)		(7)		(3)		(6)		-		-	(0)		(7)	(7)
Less: Cash reserves for future operating needs		-		-		-		-		-		-	(5)		-	(5)
Less: Cash reserves for future turnaround expenses		(8)		-		-		-		-		-	(7)		-	(7)
Less: Cash reserves for maintenance capital expenditures		-		-		-		-		-		-	(16)		-	(16)
Less: Expenses associated with East Dubuque Facility acquisition		(2)		(3)		-		-		-		-	-		-	-
Add: Impact of purchase accounting		-		13		-		-		-		-	-		-	-
Add: Available cash associated with East Dubuque 2016 first quarter		-		6		-		-		-		-	-		-	-
Add: Release of previously established cash reserves		7		-				-		-		-	-	:	18	18
Available cash for distribution		81	\$	45	\$	(10)	\$	10	\$	14	\$	8	\$ 15	\$	8 \$	45



# Reconciliation of Projected Logistics Net Income to Projected Logistics EBITDA (Annual, USD Millions)

Depreciation & amortization	 6	to	8
Depreciation & amortization  Projected Logistics EBITDA	 6 65	to	 8
Depreciation & amortization	 6	to	8
Income tax expense	10	to	12
Projected Logistics Net Income	\$ 49	to	\$ 55

## 2019 Estimated Capital Expenditures



			201	8 Actual															
							Mainte	nan	ice		Gro	wth	1		То	tal			
	Maint	tenance	G	rowth	Total		Low		High		Low		High		Low		High		
Petroleum	\$	62	\$	17	\$ 79	\$	95	\$	100	\$	20	\$	25	\$	115	\$	125		
Nitrogen Fertilizer		15		4	19		18		20		2		5		20		25		
Other		4		-	4		10		15		-		-		10		15		
Total	\$	81	\$	21	\$ 102	\$	123	\$	135	\$	22	\$	30	\$	145	\$	165		

## Simplified Organizational Structure



