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# CVR ENERGY INC(CVI)

2015 Climate Risk Disclosure Analysis
Industry Group: Oil & Gas
Standard Industrial Classification: Petroleum Refining
Index Membership: Russell 3000
Financial Year End: Dec 2014

CVR Energy, Inc. and, unless the context otherwise requires, its subsidiaries ("CVR Energy," the "Company," "we," "us," or "our") 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" or the "Refining Partnership") and CVR Partners, LP ("CVR Partners" or the "Nitrogen Fertilizer Partnership"). The Refining Partnership is an independent petroleum refiner and marketer of high value transportation fuels. The Nitrogen Fertilizer Partnership produces and markets nitrogen fertilizers in the form of UAN and ammonia. We own the general partner and a majority of the common units representing limited partner interests in each of the Refining Partnership and the Nitrogen Fertilizer Partnership. CVR Energy's common stock is listed on the New York Stock Exchange ("NYSE") under the symbol "CVI," the Refining Partnership's common units are listed on the NYSE under the symbol "CVRR" and the Nitrogen Fertilizer Partnership's common units are listed on the NYSE under the symbol "UAN. The petroleum business consists of a complex full coking medium-sour crude oil refinery in Coffeyville, Kansas with a rated capacity of 115,000 bpcd and a complex crude oil refinery in Wynnewood, Oklahoma with a rated capacity of 70,000 bpcd...

## Disclosure Breakdown

General Climate Disclosure: 10%
Regulatory Risk/Impact: 55%
Physical Risk/Impact: 10%
Renewable Energy/Clean Technology/Energy Efficiency: 25%

**DISCLOSURE RANK:** 98th percentile in Russell 3000

## DISCLOSURE ABSTRACT:

| item 1. Business | |
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| 14 | **Relevance:** 16%<br><br>The ultimate impact on our business of complying with evolving laws and regulations is not always clearly known or determinable due in part to the fact that our operations may change over time and certain implementing regulations for laws, such as the federal Clean Air Act, have not yet been finalized, are under governmental or judicial review or are being revised. These laws and regulations could result in increased capital, operating and compliance costs.<br>The principal environmental risks associated with our businesses are outlined below.<br>The Federal Clean Air Act The federal Clean Air Act and its implementing regulations, as well as the corresponding state laws and regulations that regulate emissions of pollutants into the air, affect the petroleum business and the nitrogen fertilizer business both directly and indirectly. Direct impacts may occur through the federal Clean Air Act's permitting requirements and/or emission control requirements relating to specific air pollutants, as |

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| | well as the requirement to maintain a risk management program to help prevent accidental releases of certain regulated substances. The federal Clean Air Act indirectly affects the petroleum business and the nitrogen fertilizer business by extensively regulating the air emissions of sulfur dioxide ("SO2"), volatile organic compounds, nitrogen oxides and other substances, including those emitted by mobile sources, which are direct or indirect users of our products.<br>Some or all of the standards promulgated pursuant to the federal Clean Air Act, or any future promulgations of standards, may require the installation of controls or changes to the petroleum business or the nitrogen fertilizer facilities in order to comply. If new controls or changes to operations are needed, the costs could be material. These new requirements, other requirements of the federal Clean Air Act, or other presently existing or future environmental regulations could cause us to expend substantial amounts to comply and/or permit our facilities to produce products that meet applicable requirements.<br>The regulation of air emissions under the federal Clean Air Act requires that we obtain various construction and operating permits and incur capital expenditures for the installation of certain air pollution control devices at the petroleum and nitrogen fertilizer operations when regulations change or we add new equipment or modify existing equipment. Various regulations specific to our operations have been implemented, such as National Emission Standard for Hazardous Air Pollutants ("NESHAP"), New Source Performance Standards ("NSPS") and New Source Review/Prevention of Significant Deterioration ("NSR"). We have incurred, and expect to continue to have to make, substantial capital expenditures to attain or maintain compliance with these and other air emission regulations that have been promulgated or may be promulgated or revised in the future.<br>On September 12, 2012, the U.S. Environmental Protection Agency (the "EPA") published in the Federal Register final revisions to its NSPS for process heaters and flares at petroleum refineries. The EPA originally issued final standards in June 2008, but the portions of the rule relating to process heaters and flares were stayed pending reconsideration of certain provisions. The final standards regulate emissions of nitrogen oxide from process heaters and emissions of SO2 from flares, as well as require certain work practice and monitoring standards for flares. |
| 15 | **Relevance:** 4%<br><br>Under the 2004 Consent Decree, CRRM agreed to install controls to reduce emissions of SO2, nitrogen oxides and particulate matter from its fluid catalytic cracking unit ("FCCU") by January 1, 2011. In addition, pursuant to the 2004 Consent Decree, CRRM and CRT assumed clean-up obligations at the Coffeyville refinery and the now-closed Phillipsburg terminal facilities.<br>In March 2012, CRRM entered into a second consent decree (the "Second Consent Decree") with the EPA, which replaces the 2004 Consent Decree, as amended (other than certain financial provisions associated with corrective action at the refinery and terminal under the Resource Conservation and Recovery Act ("RCRA"). The Second Consent Decree was entered by the U.S. District Court for the District of Kansas on April 19, 2012. The Second Consent Decree gives CRRM more time to install the FCCU controls from the 2004 Consent Decree and expands the scope of the settlement so that it is now considered a "global settlement" under the EPA's "National Petroleum Refining Initiative. Under the National Petroleum Refining Initiative, the EPA alleged industry-wide non-compliance with four "marquee" issues under the Clean Air Act: New Source Review, Flaring, Leak Detection and Repair, and Benzene Waste Operations NESHAP. |
| 17 | **Relevance:** 84%<br><br>Renewable Fuel Standards In 2007, the EPA promulgated the Renewable Fuel Standard ("RFS"), 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. motor fuel market, there may be a decrease in demand for petroleum products. The EPA is required to determine and publish the applicable annual renewable fuel percentage standards for each compliance year by November 30 of the prior year. The percentage standards represent the ratio of renewable fuel volume to gasoline and diesel volume. Beginning in 2011, the Coffeyville refinery was required to blend renewable fuels into its gasoline and diesel fuel or purchase RINs in lieu of blending. In 2013, the Wynnewood refinery was subject to the RFS for the first time. However, because the cost of purchasing RINs had been extremely volatile and had significantly increased, the Wynnewood refinery petitioned the EPA as a "small refinery" for hardship relief from the RFS requirements in 2013 based on the "disproportionate economic hardship" of the rule on the Wynnewood refinery. The EPA denied the petition in a letter dated September 5, 2014. During 2013, the cost of RINs became extremely volatile as the EPA's proposed renewable fuel volume mandates approached the "blend wall. The blend wall refers to the point at which refiners are required to blend more ethanol into the transportation fuel supply than can be supported by the demand for E10 gasoline (gasoline containing 10 percent ethanol by volume). In November 2013, the EPA published the annual renewable fuel percentage standards for 2014, which acknowledged the blend wall and were generally lower than the volumes for 2013 and lower than statutory mandates. The price of RINs decreased significantly after the 2014 proposed percentage standards were published; however, RIN prices remained volatile and increased subsequently in 2014. In May 2014, the EPA lowered the 2013 cellulosic biofuel standard to 0.0005%, and, in June 2014, the EPA extended the compliance demonstration deadline for the 2013 RFS to September 30, 2014. In August 2014, the EPA further extended the compliance demonstration deadline for the 2013 RFS to 30 days following the publication of the final 2014 annual renewable fuel percentage standards. In November 2014, the EPA announced that it would not finalize the 2014 annual renewable fuel percentage standards before the end of 2014, thereby extending the compliance deadline for the 2013 RFS as well.

The future cost of RINs for the petroleum business going forward is difficult to estimate, particularly until such time that the 2014 renewable fuel percentage standards are finalized and the 2015 renewable fuel percentage standards are announced. Additionally, the cost of RINs is dependent upon a variety of factors, which include EPA regulations, 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 the refineries, all of which can vary significantly from quarter to quarter. Greenhouse Gas Emissions Various regulatory and legislative measures to address greenhouse gas ("GHG") emissions (including carbon dioxide ("CO2"), methane and nitrous oxides) are in different phases of implementation or discussion. In the aftermath of its 2009 "endangerment finding" that GHG emissions pose a threat to public health and welfare, the EPA has begun to regulate GHG emissions under the authority granted to it under the federal Clean Air Act.

In October 2009, the EPA finalized a rule requiring certain large emitters of GHGs to inventory and report their GHG emissions to the EPA. In accordance with the rule, we have begun monitoring and reporting our GHG emissions to the EPA. In May 2010, the EPA finalized the "Greenhouse Gas Tailoring Rule," which established new GHG emissions thresholds that determine when stationary sources, such as the refineries and the nitrogen fertilizer plant, must obtain permits under the NSR and Title V programs of the federal Clean Air Act. The significance of the permitting requirements is that, in cases where a new source is constructed or an existing major source undergoes a major modification, the facilities are required to undergo NSR review and evaluate and install air pollution controls to reduce GHG emissions. A major modification resulting in a significant 17 increase in GHG emissions at the nitrogen fertilizer plant or the refineries may require the installation of air pollution controls as part of the permitting process.

In the meantime, in December 2010, the EPA reached a settlement agreement with

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| | numerous parties under which it agreed to promulgate NSPS to regulate GHG emissions from petroleum refineries and electric utilities by November 2012. Although the EPA has proposed standards for electric utilities, it has not yet proposed NSPS standards to regulate GHG emissions from petroleum refineries. In September 2014, the EPA indicated that the petroleum refining sector risk rule, proposed in June 2014 to address air toxics and volatile organic compounds from refineries, may make it unnecessary for the EPA to regulate GHG emissions from petroleum refineries at this time. The proposed sector risk rule would place additional emission control requirements on storage tanks, flares and coking units at petroleum refineries. Therefore, we expect that the EPA will not be issuing NSPS standards to regulate GHG from the refineries at this time but that it may do so in the future. During a State of the Union address in January 2014 and again in January 2015, President Obama indicated that the United States should take action to address climate change. At the federal legislative level, this could mean Congressional passage of legislation adopting some form of federal mandatory GHG emission reduction, such as a nationwide cap-and-trade program. It is also possible that Congress may pass alternative climate change bills that do not mandate a nationwide cap-and-trade program and instead focus on promoting renewable energy and energy efficiency.<br>In addition to potential federal legislation, a number of states have adopted regional GHG initiatives to reduce CO2 and other GHG emissions. In 2007, a group of Midwest states, including Kansas (where the Coffeyville refinery and the nitrogen fertilizer facility are located), formed the Midwestern Greenhouse Gas Reduction Accord, which calls for the development of a cap-and-trade system to control GHG emissions and for the inventory of such emissions. However, the individual states that have signed on to the accord must adopt laws or regulations implementing the trading scheme before it becomes effective, and it is unclear whether Kansas intends to do so.<br>Alternatively, the EPA may take further steps to regulate GHG emissions. The implementation of EPA regulations and/or the passage of federal or state climate change legislation may result in increased costs to (i) operate and maintain our facilities, (ii) install new emission controls on our facilities and (iii) administer and manage any GHG emissions program. Increased costs associated with compliance with any current or future legislation or regulation of GHG emissions, if it occurs, may have a material adverse effect on our results of operations, financial condition and cash flows.<br>In addition, climate change legislation and regulations may result in increased costs not only for our business but also users of our refined and fertilizer products, thereby potentially decreasing demand for our products. |
| item 1a. Risk Factors | |
| 26 | **Relevance:** 2%<br><br>Such delays or cost increases may arise as a result of unpredictable factors in the marketplace, many of which are beyond its control, including:<br>* denial or delay in obtaining regulatory approvals and/or permits;<br>* unplanned increases in the cost of equipment, materials or labor;<br>* disruptions in transportation of equipment and materials;<br>* severe adverse weather conditions, natural disasters or other events (such as equipment malfunctions, explosions, fires or spills) affecting the petroleum business' facilities, or those of its vendors and suppliers;<br>* shortages of sufficiently skilled labor, or labor disagreements resulting in unplanned work stoppages;<br>* market-related increases in a project's debt or equity financing costs; and/or nonperformance or force majeure by, or disputes with, the petroleum business' vendors, suppliers, contractors or sub-contractors. |
| 28 | **Relevance:** 2% |

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| | As a result of the fixed cost nature of its operations, downtime, interruptions or low productivity due to reduced demand, adverse weather conditions, equipment failure, a decrease in nitrogen fertilizer prices or other causes can result in significant operating losses which could have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and cash flows. |
| 29 | **Relevance:** 5%<br><br>Ethanol production in the United States is highly dependent upon a myriad of federal statutes and regulations, and is made significantly more competitive by various federal and state incentives and mandated usage of renewable fuels pursuant to the RFS. The RFS required 16.55 billion gallons of renewable fuel usage in 2013, increasing to 36.0 billion gallons by 2022. To date, the RFS has been satisfied primarily with fuel ethanol blended into gasoline. However, a number of factors, including the continuing "food versus fuel" debate and studies showing that expanded ethanol usage may increase the level of greenhouse gases in the environment as well as be unsuitable for small engine use, have resulted in calls to reduce subsidies for ethanol, allow increased ethanol imports and to repeal or waive (in whole or in part) the current RFS, any of which could have an adverse effect on corn-based ethanol production, planted corn acreage and fertilizer demand. For example, in December 2013, a bipartisan bill was introduced in Congress to eliminate the ethanol mandate from the RFS. Therefore, ethanol incentive programs may not be renewed, or if renewed, they may be renewed on terms significantly less favorable to ethanol producers than current incentive programs. In November 2013, the EPA proposed the 2014 annual renewable fuel percentage standards, including a reduced corn-based ethanol volume due in part to the concerns regarding the ethanol "blend wall," the point at which refiners are required to blend more ethanol into the transportation fuel supply than can be supported by the demand for E10 gasoline (gasoline containing 10 percent ethanol by volume). |
| 30 | **Relevance:** 5%<br><br>Adverse weather conditions during peak fertilizer application periods may have a material adverse effect on the nitrogen fertilizer business' results of operations, financial condition and cash flows, because the agricultural customers of the nitrogen fertilizer business are geographically concentrated.<br>The nitrogen fertilizer business' sales to agricultural customers are concentrated in the Great Plains and Midwest states and are seasonal in nature. The nitrogen fertilizer business' quarterly results may vary significantly from one year to the next due largely to weather-related shifts in planting schedules and purchase patterns. For example, the nitrogen fertilizer business generates greater net sales and operating income in the first half of the year, which is referred to herein as the planting season, compared to the second half of the year. Accordingly, an adverse weather pattern affecting agriculture in these regions or during the planting season could have a negative effect on fertilizer demand, which could, in turn, result in a material decline in the nitrogen fertilizer business' net sales and margins and otherwise have a material adverse effect on the nitrogen fertilizer 30 business' results of operations, financial condition and cash flows. The nitrogen fertilizer business' quarterly results may vary significantly from one year to the next due largely to weather-related shifts in planting schedules and purchase patterns. |
| 31 | **Relevance:** 2%<br><br>These transportation operations, equipment and services are subject to various hazards, including extreme weather conditions, work stoppages, delays, spills, derailments and other accidents and other operating hazards. |
| 34 | **Relevance:** 4% |

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| | In addition, the risk exposures we have at the Coffeyville, Kansas plant complex are greater due to production facilities for refinery and fertilizer production, distribution and storage being in relatively close proximity and potentially exposed to damage from one incident, such as resulting damages from the perils of explosion, windstorm, fire, or flood. Operations at either or both of the refineries and the nitrogen fertilizer plant could be curtailed, limited or completely shut down for an extended period of time as the result of one or more unforeseen events and circumstances, which may not be within our control, including:<br>* major unplanned maintenance requirements catastrophic events caused by mechanical breakdown, electrical injury, pressure vessel rupture, explosion, contamination, fire, or natural disasters, including, floods, windstorms and other similar events;<br>* labor supply shortages, or labor difficulties that result in a work stoppage or slowdown;<br>* cessation or suspension of a plant or specific operations dictated by environmental authorities; and an event or incident involving a large clean-up, decontamination, or the imposition of laws and ordinances regulating the cost and schedule of demolition or reconstruction, which can cause significant delays in restoring property to its pre-loss condition. |
| 36 | **Relevance:** 68%<br><br>Climate change laws and regulations could have a material adverse effect on our results of operations, financial condition and cash flows. Various regulatory and legislative measures to address GHG emissions (including CO2, methane and nitrous oxides) are in different phases of implementation or discussion. In the aftermath of its 2009 "endangerment finding" that GHG emissions pose a threat to public health and welfare, the EPA has begun to regulate GHG emissions under the Clean Air Act. In October 2009, the EPA finalized a rule requiring certain large emitters of GHGs to inventory and report their GHG emissions to the EPA. In accordance with the rule, we have begun monitoring and reporting our GHG emissions to the EPA. In May 2010, the EPA finalized the "Greenhouse Gas Tailoring Rule," which established new GHG emissions thresholds that determine when stationary sources, such as the refineries and the nitrogen fertilizer plant, must obtain permits under NSR and Title V programs of the federal Clean Air Act. The significance of the permitting requirement is that, in cases where a new source is constructed or an existing major source undergoes a major modification, facilities are required to undergo NSR review and evaluate and install air pollution controls to reduce GHG emissions. A major modification resulting in a significant increase in GHG emissions at the nitrogen fertilizer plant or the refineries may require the installation of air pollution controls as part of the permitting process. In the meantime, in December 2010, the EPA reached a settlement agreement with numerous parties under which it agreed to promulgate NSPS to regulate GHG emissions from petroleum refineries and electric utilities by November 2012. Although the EPA has proposed standards for electric utilities, it has not yet proposed NSPS standards to regulate GHG emissions from petroleum refineries. In September 2014, the EPA indicated that the petroleum refining sector risk rule, proposed in June 2014 to address air toxics and volatile organic compounds from refineries, may make it unnecessary for the EPA to regulate GHG emissions from petroleum refineries at this time. The proposed sector risk rule would place additional emission control requirements on storage tanks, flares and coking units at petroleum refineries. Therefore, we expect that the EPA will not be issuing NSPS standards to regulate GHG from the refineries at this time but that it may do so in the future.<br>36 During a State of the Union address in January 2014 and again in January 2015, President Obama indicated that the United States should take action to address climate change. At the federal legislative level, this could mean Congressional passage of legislation adopting some form of federal mandatory GHG emission reduction, such as a nationwide cap-and-trade program. It is also possible that Congress may pass alternative climate change bills that do not mandate a nationwide cap-and-trade program and instead focus on promoting renewable energy and energy efficiency. In addition to potential federal |

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| | legislation, a number of states have adopted regional greenhouse gas initiatives to reduce CO2 and other GHG emissions. In 2007, a group of Midwest states, including Kansas (where the Coffeyville refinery and the nitrogen fertilizer facility are located), formed the Midwestern Greenhouse Gas Reduction Accord, which calls for the development of a cap-and-trade system to control GHG emissions and for the inventory of such emissions. However, the individual states that have signed on to the accord must adopt laws or regulations implementing the trading scheme before it becomes effective, and it is unclear whether Kansas intends to do so. Alternatively, the EPA may take further steps to regulate GHG emissions. The implementation of EPA regulations and/or the passage of federal or state climate change legislation may result in increased costs to (i) operate and maintain our facilities, (ii) install new emission controls on our facilities and (iii) administer and manage any GHG emissions program. Increased costs associated with compliance with any current or future legislation or regulation of GHG emissions, if it occurs, may have a material adverse effect on our results of operations, financial condition and cash flows. In addition, climate change legislation and regulations may result in increased costs not only for our business but also users of our refined and fertilizer products, thereby potentially decreasing demand for our products. |
| item 6. Selected Consolidated Financial Data | |
| 60 | **Relevance:** 15%<br><br>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 EPA's Renewable Fuel Standard ("RFS"), which requires it to either blend "renewable fuels" in with its transportation fuels or purchase renewable fuel credits, known as renewable identification numbers ("RINs"), in lieu of blending.<br>The EPA is required to determine and publish the applicable annual renewable fuel percentage standards for each compliance year by November 30 for the forthcoming year. The percentage standards represent the ratio of renewable fuel volume to gasoline and diesel volume. Beginning in 2011, the Coffeyville refinery was required to blend renewable fuels into its gasoline and diesel fuel or purchase RINs in lieu of blending. In 2013, the Wynnewood refinery was subject to the RFS for the first time. During 2013, the cost of RINs became extremely volatile as the EPA's proposed renewable fuel volume mandates approached the "blend wall. The blend wall refers to the point at which refiners are required to blend more ethanol into the transportation fuel supply than can be supported by the demand for E10 gasoline (gasoline containing 10 percent ethanol by volume). In November 2013, the EPA published the annual renewable fuel percentage standards for 2014, which acknowledged the blend wall and were generally lower than the volumes for 2013 and lower than statutory mandates. The price of RINs decreased significantly after the 2014 proposed mandate was published; however, RIN prices remained volatile and increased subsequently in 2014. In May 2014, the EPA lowered the 2013 cellulosic biofuel standard to 0.0005%, and, in June 2014, the EPA extended the compliance demonstration deadline for the 2013 RFS to September 30, 2014. In August 2014, the EPA further extended the compliance demonstration deadline for the 2013 RFS to 30 days following the publication of the final 2014 annual renewable fuel percentage standards. In November 2014, the EPA announced that it would not finalize the 2014 annual renewable fuel percentage standards before the end of 2014, thereby extending the compliance deadline for the 2013 RFS as well.<br>The cost of RINs for the years ended December 31, 2014, 2013 and 2012 was approximately $127.2 million, $180.5 million and $21.0 million, respectively. The future cost of RINs for the petroleum business is difficult to estimate, particularly until such time that the 2014 renewable fuel percentage standards are finalized and the 2015 renewable fuel percentage standards are announced. |
| item 7a. Quantitative and Qualitative Disclosures about Market Risk | |

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| 142 | **Relevance:** 5%<br><br>Under the 2004 Consent Decree, CRRM agreed to install controls to reduce emissions of sulfur dioxide, nitrogen oxides and particulate matter from its FCCU by January 1, 2011. In addition, pursuant to the 2004 Consent Decree, CRRM and CRT assumed clean-up obligations at the Coffeyville refinery and the now-closed Phillipsburg terminal facilities.<br>In March 2012, CRRM entered into a "Second Consent Decree" with the EPA, which replaces the 2004 Consent Decree, as amended (other than certain financial assurance provisions associated with corrective action at the refinery and terminal under RCRA). The Second Consent Decree was entered by the U.S. District Court for the District of Kansas on April 19, 2012. The 141 CVR Energy, Inc. and Subsidiaries NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)<br>Second Consent Decree gives CRRM more time to install the FCCU controls from the 2004 Consent Decree and expands the scope of the settlement so that it is now considered a "global settlement" under the EPA's "National Petroleum Refining Initiative. Under the National Petroleum Refining Initiative, the EPA alleged industry-wide non-compliance with four "marquee" issues under the Clean Air Act: New Source Review, Flaring, Leak Detection and Repair, and Benzene Waste Operations NESHAP. |