

ROYAL BANK OF CANADA  
Form 424B2  
December 28, 2017

RBC Capital Markets® Filed Pursuant to Rule 424(b)(2)  
Registration Statement No. 333-208507

Pricing Supplement  
Dated December 26,  
2017

To the Product \$500,000  
Prospectus Supplement Barrier Enhanced Return Notes  
ERN-ETF-1 Dated Linked to the Alerian MLP ETF,  
January 11, 2016, Due December 30, 2021  
Prospectus Supplement Royal Bank of Canada  
Dated January 8, 2016  
and Prospectus Dated  
January 8, 2016

Royal Bank of Canada is offering the Barrier Enhanced Return Notes (the “Notes”) linked to the performance of the Alerian MLP ETF (the “Reference Asset”).

The CUSIP number for the Notes is 78013XCR7. The Notes do not pay interest. The Notes provide a 125.00% leveraged positive return if the share price of the Reference Asset increases from the Initial Level to the Final Level. Investors are subject to one-for-one loss of the principal amount of the Notes in percentage terms if the closing price of the Reference Asset on the Valuation Date is less than 60.00% of the Initial Level. Any payments on the Notes are subject to our credit risk.

Issue Date: December 29, 2017

Maturity Date: December 30, 2021

The Notes will not be listed on any securities exchange.

Investing in the Notes involves a number of risks. See “Risk Factors” beginning on page S-1 of the prospectus supplement dated January 8, 2016, “Additional Risk Factors Specific to the Notes” beginning on page PS-6 of the product prospectus supplement dated January 11, 2016, and “Selected Risk Considerations” beginning on page P-6 of this pricing supplement.

The Notes will not constitute deposits insured by the Canada Deposit Insurance Corporation, the U.S. Federal Deposit Insurance Corporation or any other Canadian or U.S. government agency or instrumentality.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined that this pricing supplement is truthful or complete. Any representation to the contrary is a criminal offense.

	<u>Per Note</u>	<u>Total</u>
Price to public <sup>(1)</sup>	100.00%	\$ 500,000.00
Underwriting discounts and commissions <sup>(1)</sup>	2.25%	\$ 11,250.00
Proceeds to Royal Bank of Canada	97.75%	\$ 488,750.00

<sup>(1)</sup> Certain dealers who purchased the Notes for sale to certain fee-based advisory accounts may have foregone some or all of their underwriting discount or selling concessions. The public offering price for investors purchasing the Notes in these accounts was between \$977.50 and \$1,000 per \$1,000 in principal amount.

The initial estimated value of the Notes as of the date of this pricing supplement is \$898.62 per \$1,000 in principal amount, which is less than the price to public. The actual value of the Notes at any time will reflect many factors, cannot be predicted with accuracy, and may be less than this amount. We describe our determination of the initial

estimated value in more detail below.

RBC Capital Markets, LLC, which we refer to as RBCCM, acting as agent for Royal Bank of Canada, received a commission of \$22.50 per \$1,000 in principal amount of the Notes and used a portion of that commission to allow selling concessions to other dealers of up to \$22.50 per \$1,000 in principal amount of the Notes. The other dealers may forgo, in their sole discretion, some or all of their selling concessions. See “Supplemental Plan of Distribution (Conflicts of Interest)” below.

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#### SUMMARY

The information in this “Summary” section is qualified by the more detailed information set forth in this pricing supplement, the product prospectus supplement, the prospectus supplement, and the prospectus.

Issuer: Royal Bank of Canada (“Royal Bank”)  
Issue: Senior Global Medium-Term Notes, Series G  
Underwriter: RBC Capital Markets, LLC (“RBCCM”)  
Reference Asset: Alerian MLP ETF, which seeks investment results that generally correspond (before fees and expenses) to the price and yield of the Alerian MLP Infrastructure Index (the “Underlying Index”).  
Bloomberg Ticker: AMLP  
Currency: U.S. Dollars  
Minimum Investment: \$1,000 and minimum denominations of \$1,000 in excess thereof  
Pricing Date: December 26, 2017  
Issue Date: December 29, 2017  
CUSIP: 78013XCR7  
Valuation Date: December 27, 2021

If, on the Valuation Date, the Percentage Change is positive, then the investor will receive an amount per \$1,000 principal amount per Note equal to:

Principal Amount + (Principal Amount x Percentage Change x Leverage Factor)

Payment at Maturity (if held to maturity): If, on the Valuation Date, the Percentage Change is less than or equal to 0%, but the Final Level is not less than the Barrier Level (that is, the Percentage Change is between zero and -40.00%), then the investor will receive the principal amount only.

If, on the Valuation Date, the Final Level is less than the Barrier Level (that is, the Percentage Change is between -40.01% and -100%), then the investor will receive a cash payment equal to:

Principal Amount + (Principal Amount x Percentage Change)

In this case, you will lose all or a portion of the principal amount of the Notes.

Percentage Change: The Percentage Change, expressed as a percentage, is calculated using the following formula:

Initial Level: \$10.86, which was the closing share price of the Reference Asset on the Pricing Date.

Final Level: The closing share price of the Reference Asset on the Valuation Date.

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Leverage Factor: 125.00%

Barrier Level: \$6.52, which is 60.00% of the Initial Level (rounded to two decimal places)

Maturity Date: December 30, 2021, subject to extension for market and other disruptions, as described in the product prospectus supplement dated January 11, 2016.

Term: Four (4) years

Principal at Risk: The Notes are NOT principal protected. You may lose all or a substantial portion of your principal amount at maturity if there is a percentage decrease from the Initial Level to the Final Level of more than 40.00%.

Calculation Agent: RBCCM

U.S. Tax Treatment: By purchasing a Note, each holder agrees (in the absence of a change in law, an administrative determination or a judicial ruling to the contrary) to treat the Notes as a pre-paid cash-settled derivative contract for U.S. federal income tax purposes. However, the U.S. federal income tax consequences of your investment in the Notes are uncertain and the Internal Revenue Service could assert that the Notes should be taxed in a manner that is different from that described in the preceding sentence. Please see the section below, “Supplemental Discussion of U.S. Federal Income Tax Consequences,” and the discussion (including the opinion of our counsel Morrison & Foerster LLP) in the product prospectus supplement dated January 11, 2016 under “Supplemental Discussion of U.S. Federal Income Tax Consequences,” which apply to the Notes.

Secondary Market: RBCCM (or one of its affiliates), though not obligated to do so, may maintain a secondary market in the Notes after the Issue Date. The amount that you may receive upon sale of your Notes prior to maturity may be less than the principal amount of your Notes.

Listing: The Notes will not be listed on any securities exchange.

Clearance and Settlement: DTC global (including through its indirect participants Euroclear and Clearstream, Luxembourg as described under “Description of Debt Securities—Ownership and Book-Entry Issuance” in the prospectus dated January 8, 2016).

Terms Incorporated in the Master Note: All of the terms appearing above the item captioned “Secondary Market” on pages P-2 and P-3 of this pricing supplement and the terms appearing under the caption “General Terms of the Notes” in the product prospectus supplement dated January 11, 2016, as modified by this pricing supplement.

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#### ADDITIONAL TERMS OF YOUR NOTES

You should read this pricing supplement together with the prospectus dated January 8, 2016, as supplemented by the prospectus supplement dated January 8, 2016 and the product prospectus supplement dated January 11, 2016, relating to our Senior Global Medium-Term Notes, Series G, of which these Notes are a part. Capitalized terms used but not defined in this pricing supplement will have the meanings given to them in the product prospectus supplement. In the event of any conflict, this pricing supplement will control. The Notes vary from the terms described in the product prospectus supplement in several important ways. You should read this pricing supplement carefully.

This pricing supplement, together with the documents listed below, contains the terms of the Notes and supersedes all prior or contemporaneous oral statements as well as any other written materials including preliminary or indicative pricing terms, correspondence, trade ideas, structures for implementation, sample structures, brochures or other educational materials of ours. You should carefully consider, among other things, the matters set forth in “Risk Factors” in the prospectus supplement dated January 8, 2016 and “Additional Risk Factors Specific to the Notes” in the product prospectus supplement dated January 11, 2016, as the Notes involve risks not associated with conventional debt securities. We urge you to consult your investment, legal, tax, accounting and other advisors before you invest in the Notes. You may access these documents on the Securities and Exchange Commission (the “SEC”) website at [www.sec.gov](http://www.sec.gov) as follows (or if that address has changed, by reviewing our filings for the relevant date on the SEC website):

Prospectus dated January 8, 2016:

<http://www.sec.gov/Archives/edgar/data/1000275/000121465916008810/j18160424b3.htm>

Prospectus Supplement dated January 8, 2016:

<http://www.sec.gov/Archives/edgar/data/1000275/000121465916008811/p14150424b3.htm>

Product Prospectus Supplement ERN-ETF-1 dated January 11, 2016:

<https://www.sec.gov/Archives/edgar/data/1000275/000114036116047385/form424b5.htm>

Our Central Index Key, or CIK, on the SEC website is 1000275. As used in this pricing supplement “we,” “us,” or “our” refers to Royal Bank of Canada.

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#### HYPOTHETICAL RETURNS

The examples set out below are included for illustration purposes only. The hypothetical Percentage Changes of the Reference Asset used to illustrate the calculation of the Payment at Maturity (rounded to two decimal places) are not estimates or forecasts of the Final Level or the share price of the Reference Asset on any trading day prior to the Maturity Date. All examples are based on the Barrier Level of 60.00% of the Initial Level, the Leverage Factor of 125.00%, and assume that a holder purchased Notes with an aggregate principal amount of \$1,000 and that no market disruption event occurs on the Valuation Date.

Example 1— Calculation of the Payment at Maturity where the Percentage Change is positive.

Percentage Change: 10%

Payment at Maturity:  $\$1,000 + (\$1,000 \times 10\% \times 125.00\%) = \$1,000 + \$125.00 = \$1,125.00$

On a \$1,000 investment, a 10% Percentage Change results in a Payment at Maturity of \$1,125.00, a 12.50% return on the Notes.

Example 2— Calculation of the Payment at Maturity where the Percentage Change is negative (but the Final Level is greater than the Barrier Level).

Percentage Change: -20%

Payment at Maturity: In this case, even though the Percentage Change is negative, you will receive the principal amount of your Notes at maturity, because the closing price of the Reference Asset on the Valuation Date is greater than 60.00% of the Initial Level.

On a \$1,000 investment, a -20% Percentage Change results in a Payment at Maturity of \$1,000, a 0% return on the Notes.

Example 3— Calculation of the Payment at Maturity where the Percentage Change is negative, and the Final Level is less than the Barrier Level.

Percentage Change: -65%

Payment at Maturity:  $\$1,000 + (\$1,000 \times -65\%) = \$1,000 - \$650.00 = \$350.00$

On a \$1,000 investment, a -65% Percentage Change results in a Payment at Maturity of \$350.00, a -65.00% return on the Notes.

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## SELECTED RISK CONSIDERATIONS

An investment in the Notes involves significant risks. Investing in the Notes is not equivalent to investing directly in the Reference Asset. These risks are explained in more detail in the section “Additional Risk Factors Specific to the Notes,” beginning on page PS-4 of the product prospectus supplement. In addition to the risks described in the prospectus supplement and the product prospectus supplement, you should consider the following:

**Principal at Risk** - Investors in the Notes could lose all or a substantial portion of their principal amount if the Final Level is less than the Barrier Level. In such a case, you will lose 1% of the principal amount of your Notes for each 1% that the Final Level is less than the Initial Level.

**The Notes Do Not Pay Interest and Your Return May Be Lower than the Return on a Conventional Debt Security of Comparable Maturity** – There will be no periodic interest payments on the Notes as there would be on a conventional fixed-rate or floating-rate debt security having the same maturity. The return that you will receive on the Notes, which could be negative, may be less than the return you could earn on other investments. Even if your return is positive, your return may be less than the return you would earn if you bought a conventional senior interest bearing debt security of Royal Bank.

**Payments on the Notes Are Subject to Our Credit Risk, and Changes in Our Credit Ratings Are Expected to Affect the Market Value of the Notes** – The Notes are Royal Bank’s senior unsecured debt securities. As a result, your receipt of the amount due on the maturity date is dependent upon Royal Bank’s ability to repay its obligations at that time. This will be the case even if the share price of the Reference Asset increases after the Pricing Date. No assurance can be given as to what our financial condition will be at the maturity of the Notes.

**There May Not Be an Active Trading Market for the Notes—Sales in the Secondary Market May Result in Significant Losses** – There may be little or no secondary market for the Notes. The Notes will not be listed on any securities exchange. RBCCM and other affiliates of Royal Bank may make a market for the Notes; however, they are not required to do so. RBCCM or any other affiliate of Royal Bank may stop any market-making activities at any time. Even if a secondary market for the Notes develops, it may not provide significant liquidity or trade at prices advantageous to you. We expect that transaction costs in any secondary market would be high. As a result, the difference between bid and asked prices for your Notes in any secondary market could be substantial.

**You Will Not Have Any Rights to the Securities Included in the Reference Asset** – As a holder of the Notes, you will not have voting rights or rights to receive cash dividends or other distributions or other rights that holders of securities included in the Reference Asset would have. The Final Level will not reflect any dividends paid on the securities included in the Reference Asset, and accordingly, any positive return on the Notes may be less than the potential positive return on those securities.

**The Initial Estimated Value of the Notes Is Less than the Price to the Public** – The initial estimated value set forth on the cover page of this pricing supplement does not represent a minimum price at which we, RBCCM or any of our affiliates would be willing to purchase the Notes in any secondary market (if any exists) at any time. If you attempt to sell the Notes prior to maturity, their market value may be lower than the price you paid for them and the initial estimated value. This is due to, among other things, changes in the share price of the Reference Asset, the borrowing rate we pay to issue securities of this kind, and the inclusion in the price to the public of the underwriting discount and the estimated costs relating to our hedging of the Notes. These factors, together with various credit, market and economic factors over the term of the Notes, are expected to reduce the price at which you may be able to sell the Notes in any secondary market and will affect the value of the Notes in complex and unpredictable ways. Assuming no change in market conditions or any other relevant factors, the price, if any, at which you may be able to sell your Notes prior to maturity may be less than your original purchase price, as any such sale price would not be expected to include the underwriting discount and the hedging costs relating to the Notes. In addition to bid-ask spreads, the

value of the Notes determined by RBCCM for any secondary market price is expected to be based on the secondary rate rather than the internal funding rate used to price the Notes and determine the initial estimated value. As a result, the secondary price will be less than if the internal funding rate was used. The Notes are not designed to be short-term trading instruments. Accordingly, you should be able and willing to hold your Notes to maturity.

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The Initial Estimated Value of the Notes Is an Estimate Only, Calculated as of the Time the Terms of the Notes Were Set – The initial estimated value of the Notes is based on the value of our obligation to make the payments on the Notes, together with the mid-market value of the derivative embedded in the terms of the Notes. See “Structuring the Notes” below. Our estimate is based on a variety of assumptions, including our credit spreads, expectations as to dividends, interest rates and volatility, and the expected term of the Notes. These assumptions are based on certain forecasts about future events, which may prove to be incorrect. Other entities may value the Notes or similar securities at a price that is significantly different than we do.

The value of the Notes at any time after the Pricing Date will vary based on many factors, including changes in market conditions, and cannot be predicted with accuracy. As a result, the actual value you would receive if you sold the Notes in any secondary market, if any, should be expected to differ materially from the initial estimated value of your Notes.

Market Disruption Events and Adjustments – The payment at maturity and the Valuation Date are subject to adjustment as described in the product prospectus supplement. For a description of what constitutes a market disruption event as well as the consequences of that market disruption event, see “General Terms of the Notes—Market Disruption Events” in the product prospectus supplement.

The Securities Composing the Underlying Index Are Concentrated in One Sector – All of the securities included in the Underlying Index are issued by companies in the energy infrastructure industry. As a result, the securities that will determine the performance of the underlying shares and the value of the Notes are concentrated in one sector. Although an investment in the Notes will not give holders any ownership or other direct interests in the securities composing the Underlying Index, the return on an investment in the Notes will be subject to certain risks associated with a direct equity investment in companies in the market sector. Accordingly, by investing in the Notes, you will not benefit from the diversification which could result from an investment linked to companies that operate in multiple sectors.

An Investment in the Notes Is Subject to Risks Associated With the Energy Infrastructure Sector – The stocks of companies in the energy infrastructure sector are subject to risks specific to the industry they serve. The issuers of the stocks held by the Reference Asset are U.S. energy infrastructure Master Limited Partnerships (“MLPs”) that earn a majority of their cash flow from the transportation, storage and processing of energy commodities. Stock prices for these types of companies are affected by supply and demand for crude oil, natural gas, refined petroleum products and other energy commodities available for transporting, processing or storing. Changes in the regulatory environment, extreme weather, rising interest rates, world events and economic conditions will likewise affect the performance of these companies. Correspondingly, the stocks of companies in this sector are subject to price fluctuations caused by events relating to international politics, energy conservation, tax and other governmental regulatory policies. Weak demand for oil and gas products and services in general, as well as negative developments in these other areas, would adversely impact the prices of the stocks held by the Reference Asset, the market price of the Reference Asset, and the value of the Notes.

An Investment in the Notes is Subject to Risks Associated with Investments in MLPs – All of the stocks held by the Reference Asset are MLPs. Investments in securities of MLPs involve risks that differ from investments in common stock including risks related to limited control and limited rights to vote on matters affecting the MLP, risks related to potential conflicts of interest between the MLP and the MLP’s general partner, and cash flow risks. MLP common units and other equity securities can be affected by macro-economic and other factors affecting the stock market in general, expectations of interest rates, investor sentiment towards MLPs or the energy sector, changes in a particular issuer’s financial condition, or unfavorable or unanticipated poor performance of a particular issuer (in the case of MLPs, generally measured in terms of distributable cash flow).

Changes that Affect the Underlying Index Will Affect the Market Value of the Notes and the Amount You Will Receive at Maturity — The policies of Alerian, the sponsor of the Underlying Index (the “Index Sponsor”), concerning the calculation of the Underlying Index, additions, deletions or substitutions of the components of the Underlying Index and the manner in which changes affecting those components, such as stock dividends, reorganizations or mergers, may be reflected in the Underlying Index and, therefore, could affect the share price of the Reference Asset, the amount payable on the Notes at maturity, and the market value of the Notes prior to maturity. The amount payable on the Notes and their market value could also be affected if the Index Sponsor changes these policies, for example, by changing the manner in which it calculates the Underlying Index, or if the sponsor discontinues or suspends the calculation or publication of the Underlying Index.

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**Adjustments to the Reference Asset Could Adversely Affect the Notes** —ALPS Advisors, Inc., as the advisor of the Reference Asset (the “Advisor”), is responsible for calculating and maintaining the Reference Asset. The Advisor can add, delete or substitute the stocks comprising the Reference Asset. The Advisor may make other methodological changes that could change the share price of the Reference Asset at any time. If one or more of these events occurs, the calculation of the amount payable at maturity may be adjusted to reflect such event or events. Consequently, any of these actions could adversely affect the amount payable at maturity and/or the market value of the Notes.

**We and Our Affiliates Do Not Have Any Affiliation with the Advisor and Are Not Responsible for its Public Disclosure of Information** — We and our affiliates are not affiliated with Advisor in any way and have no ability to control or predict its actions, including any errors in or discontinuance of disclosure regarding its methods or policies relating to the Reference Asset. The Advisor is not involved in the offering of the Notes in any way and has no obligation to consider your interests as an owner of the Notes in taking any actions relating to the Reference Asset that might affect the value of the Notes. Neither we nor any of our affiliates has independently verified the adequacy or accuracy of the information about the Advisor or the Reference Asset contained in any public disclosure of information. You, as an investor in the Notes, should make your own investigation into the Reference Asset.

**The Correlation Between the Performance of the Reference Asset and the Performance of the Underlying Index May Be Imperfect** — The performance of the Reference Asset is linked principally to the performance of the Underlying Index. However, because of the potential discrepancies identified in more detail in the product prospectus supplement, the return on the Reference Asset may correlate imperfectly with the return on the Underlying Index.

**The Reference Asset Is Subject to Management Risks** — The Reference Asset is subject to management risk, which is the risk that the Advisor’s investment strategy, the implementation of which is subject to a number of constraints, may not produce the intended results. For example, the Advisor may invest a portion of the Reference Asset’s assets in securities not included in the relevant industry or sector but which BlackRock believes will help the Reference Asset track the relevant industry or sector.

**Our Business Activities May Create Conflicts of Interest** — We and our affiliates expect to engage in trading activities related to the Reference Asset or the securities held by the Reference Asset that are not for the account of holders of the Notes or on their behalf. These trading activities may present a conflict between the holders’ interests in the Notes and the interests we and our affiliates will have in their proprietary accounts, in facilitating transactions, including options and other derivatives transactions, for their customers and in accounts under their management. These trading activities, if they influence the prices of the Reference Asset, could be adverse to the interests of the holders of the Notes. We and one or more of our affiliates may, at present or in the future, engage in business with the issuers of the securities held by the Reference Asset, including making loans to or providing advisory services. These services could include investment banking and merger and acquisition advisory services. These activities may present a conflict between our or one or more of our affiliates’ obligations and your interests as a holder of the Notes.

Moreover, we and our affiliates may have published, and in the future expect to publish, research reports with respect to the Reference Asset. This research is modified from time to time without notice and may express opinions or provide recommendations that are inconsistent with purchasing or holding the Notes. Any of these activities by us or one or more of our affiliates may affect the price of the Reference Asset, and, therefore, the market value of the Notes.

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#### INFORMATION REGARDING THE REFERENCE ASSET

Information provided to or filed with the SEC by the Reference Asset under the Securities Act of 1933, as amended, and the Investment Company Act of 1940, as amended, can be located by reference to SEC file numbers 333-148826 and 811-22175, respectively, through the SEC's website at <http://www.sec.gov>. In addition, information regarding the Reference Asset may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. We have not participated in the preparation of, or verified, such publicly available information. None of the forgoing documents or filings are incorporated by reference in, and should not be considered part of, this document.

The following information regarding the Reference Asset is derived from publicly available information.

We have not independently verified the accuracy or completeness of reports filed by the Reference Asset with the SEC, information published by it on its website or in any other format, information about it obtained from any other source or the information provided below.

The Notes are not sponsored, endorsed, sold or promoted by the investment adviser. The investment adviser makes no representations or warranties to the owners of the Notes or any member of the public regarding the advisability of investing in the Notes. The investment adviser has no obligation or liability in connection with the operation, marketing, trading or sale of the Notes.

We obtained the information regarding the historical performance of the Reference Asset set forth below from Bloomberg Financial Markets.

We have not independently verified the accuracy or completeness of the information obtained from Bloomberg Financial Markets. The historical performance of the Reference Asset should not be taken as an indication of its future performance, and no assurance can be given as to the market price of the Reference Asset on the Valuation Date. We cannot give you assurance that the performance of the Reference Asset will not result in the loss of all or part of your investment.

#### The Alerian MLP ETF

The Reference Asset is an investment portfolio maintained and managed by ALPS ETF Trust, a registered investment company. The AMLP's investment advisor is ALPS Advisors, Inc. ("ALPS"). The inception date of the Reference Asset is August 25, 2010. The Reference Asset is an exchange traded fund that trades on NYSE Arca under the ticker symbol "AMLP."

The Reference Asset seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of the Alerian MLP Infrastructure Index (the "underlying index"). The underlying index represents energy infrastructure Master Limited Partnerships ("MLPs") that earn the majority of their cash flow from the transportation, storage, and processing of energy commodities.

#### Investment Objective and Strategy

The Reference seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of the underlying index. The Reference Asset's investment objective may be changed by its board of trustees without shareholder approval. As a principal investment strategy, the Reference Asset will normally invest at least 90% of its total assets in component securities that comprise the underlying index. The Reference Asset generally will invest in all of the securities that comprise the underlying index in proportion to their weightings in the underlying index however, under various circumstances, it may not be possible or practicable to purchase all of the securities in the underlying index in those weightings. The Reference Asset may not be fully invested at times, either as a result of cash flows into the Reference Asset or reserves of cash held by the Reference Asset to meet redemptions and expenses. In any of those circumstances, the Reference Asset may purchase a sample of the securities in the underlying index or utilize various combinations of other available investment techniques in seeking performance which corresponds to the performance of the underlying index. As a non-principal investment strategy, the Reference

Asset may invest its remaining assets in money market instruments, including repurchase agreements or other funds which invest exclusively in money market instruments, convertible securities, structured notes, forward foreign currency exchange contracts and in swaps, options and futures contracts. Swaps, options and futures contracts (and convertible

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securities and structured notes) may be used by the Reference Asset in seeking performance that corresponds to the underlying index, and in managing cash flows.

#### Correlation

The performance of the Reference Asset and the underlying index may vary due to a variety of factors. Unlike many ETFs, the Reference Asset expects to effect redemptions of creation units for cash, rather than in-kind. The Reference Asset may not be fully invested at times, either as a result of cash flows into the Reference Asset or reserves of cash held by the Reference Asset to meet redemptions and expenses. In addition, another significant factor is the Reference Asset's tax expense (as described in the next paragraph), as well as the Reference Asset's operating expenses (including management fees) and costs the Reference Asset incurs in buying and selling securities, especially when rebalancing the Reference Asset's holdings to reflect changes in the composition of the underlying index.

Unlike most other investment companies, the Reference Asset is not eligible to elect to be treated as a regulated investment company for tax purposes because of its investments primarily in MLPs invested in energy assets. Thus, the Reference Asset is obligated to pay federal and applicable state and foreign corporate taxes on its taxable income. The amount of taxes paid by the Reference Asset will vary depending on the amount of income and gains derived from investments or sales of MLP interests. Cash distributions from an MLP to the Reference Asset that exceed the Reference Asset's allocable share of such MLP's net taxable income will reduce the Reference Asset's adjusted tax basis in the equity securities of the MLP. These reductions in the Reference Asset's adjusted tax basis in the MLP equity securities will increase the amount of any taxable gain (or decrease the amount of any tax loss) recognized by the Reference Asset on a subsequent sale of the securities. The Reference Asset will accrue deferred income taxes for any future tax liability associated with that portion of MLP distributions considered to be a tax-deferred return of capital as well as capital appreciation of its investments. Upon the sale of an MLP security, the Reference Asset may be liable for previously deferred taxes. The underlying index, however, is calculated without any deductions for taxes. As a result, the Reference Asset's after tax performance could differ significantly from the underlying index even if the pretax performance of the Reference Asset and the performance of the underlying index are closely correlated. The information above was compiled from the ALPS website. We have not independently investigated the accuracy of that information. Information contained in the ALPS website is not incorporated by reference in, and should not be considered a part of, this document.

#### The Underlying Index

The Alerian MLP Infrastructure Index is currently comprised of 25 energy infrastructure MLPs. The MLPs in the underlying index earn a majority of their revenues from transportation, storage and processing of energy commodities. The underlying index constituents earn the majority of their cash flow from the transportation, storage, and processing of energy commodities.

The underlying index is calculated using a capped, float-adjusted, capitalization-weighted methodology and is disseminated real-time on a price return basis by the NYSE under the ticker "AMZI" and by other data vendors. The base date for the underlying index is December 29, 1995, with a base value of 100. The underlying index is sponsored and maintained by Alerian and is calculated by S&P Dow Jones Indices LLC. Additional information about the underlying index may be obtained from other sources including, but not limited to, press releases, newspaper articles, other publicly available documents, and on the index sponsor's website, [www.alerian.com](http://www.alerian.com). We are not incorporating by reference the website, the sources listed above or any material they include in this document.

#### Index Constituents

The following criteria must be met for a current constituent to be eligible to remain in the underlying index or for a new constituent to be eligible for addition to the underlying index:

1. Is a publicly traded partnership or limited liability company ("LLC")
- 2.

Earns the majority of its cash flow from gathering and processing, liquefaction, midstream services, pipeline transportation, rail terminaling, and storage of energy commodities

Represents the primary limited partner interests of a partnership or LLC that is an operating company (excluding, among others, the following types of securities: general partner (“GP”) interests, i-units, preferred units, exchange-traded products, open-end funds, closed-end funds and royalty trusts)

4. Declared a distribution for the trailing two quarters;

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5. Has a median daily trading volume of at least \$2.5 million for the six-month period preceding the data analysis date and
6. Has an adjusted market capitalization (“AMC”) in the top 90% of total midstream energy MLP float-adjusted market capitalization.

The majority of cash flow for purposes of criteria 2 above is calculated on a trailing-four-quarter basis using a company’s reported business segments. Exceptions may be made on a case-by-case basis to accelerate the eligibility or ineligibility of companies that have been transformed by a recent acquisition. Cash flow from a partnership’s GP interest or incentive distribution rights in another publicly traded partnership or LLC is zeroed for the purposes of this determination.

A non-constituent will only be added to the underlying index during the (a) quarterly rebalancing process if it meets all criteria or (b) special rebalancing process if it (i) is acquiring the constituent that is being removed and (ii) meets all criteria. A constituent will remain in the underlying index if it continues to meet the first five criteria and has an AMC greater than or equal to 80% of the AMC of the smallest company in the top 90% of total midstream energy MLP float-adjusted market capitalization. Constituents will only be removed from the underlying index for failing to meet criteria during the quarterly rebalancing process. A non-constituent that has entered into a merger agreement to be acquired is not eligible to be added to the underlying index.

These criteria are reviewed regularly to ensure consistency with industry trends.

#### Units Outstanding

Units included in the calculation of units outstanding include, but are not limited to, common units, subordinated units, special class units, and paid-in-kind units. Units excluded from the calculation of units outstanding are GP units, management incentive units, and tradable, non-common units.

The units outstanding number generally reflects that which is represented by the latest annual or quarterly report, unless otherwise indicated by a press release or SEC document filed in connection with a transaction. The following is a non-exhaustive list of qualifying transactions and the point at which they are reflected in a security’s units outstanding:

Qualifying Transaction	Reflected in Units Outstanding
Follow-on public equity offerings	Time of pricing
Over-allotment option exercises	Earlier of time of press release or current report
Private investments in public equity (“PIPEs”)	Time of closing
Unit repurchases	Earlier of time of press release or current report
At-the-market equity offerings	As reported in periodic reports, prospectuses, or proxies

Unless a lock-up period has been specified, common units issued in a PIPE transaction are considered to be freely tradable upon the earlier of (a) the effective date of the accompanying SEC registration statement or (b) 180 days after the transaction close, pursuant to SEC Rule 144.

#### Investable Weight Factors

A security’s investable weight factor (“IWF”) is calculated as follows:

#### Index Calculation

The underlying index is calculated by S&P Dow Jones Indices LLC using a capped, float-adjusted, capitalization-weighted methodology as follows:

- [Initial Divisor] = [Base Date Index Market Capitalization] / 100
- [Index Value] = [Index Market Capitalization] / Divisor



·[Post-Rebalance Divisor] = [Post-Rebalance Index Market Capitalization] / [Pre-Rebalance Index Value]

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#### Index Rebalancing

Index rebalancings fall into two groups: quarterly rebalancings and special rebalancings. Quarterly rebalancings occur on the third Friday of each March, June, September, and December, and are effective at the open of the next trading day. In the event that the major U.S. exchanges are closed on the third Friday of March, June, September, or December, the rebalancing will take place after market close on the immediately preceding trading day. Data relating to constituent eligibility, additions, and deletions are analyzed as of 4:00 p.m., Eastern Time, on the last trading day of February, May, August, and November. The index shares of each constituent are then calculated according to its proportion of the total float-adjusted market capitalization of all constituents, and assigned after market close on the quarterly rebalancing date. Since index shares are assigned based on prices on the last trading day of February, May, August, and November, the weight of each constituent on the quarterly rebalancing date may differ from its target weight due to market movements.

After market close on the last trading day of February, May, August, and November, the post-rebalancing constituents are weighted and ranked by float-adjusted market capitalization. If the weight of the largest constituent exceeds 10%, it is assigned a weight of 10% and its excess weight is proportionately distributed to the remaining constituents. After this distribution, if the weight of the next largest constituent exceeds 10%, it is assigned a weight of 10% and its excess weight is proportionately distributed to the remaining constituents. This process is repeated until none of the remaining constituents has a weight that exceeds 10%.

Special rebalancings are triggered by corporate actions and are implemented as practically as possible on a case-by-case basis. Generally, in a merger between two or more index constituents, the special rebalancing will take place one trading day after the constituent's issuance of a press release indicating that all needed merger votes have passed. If the stock is delisted before market open on the first trading day after all needed merger votes have passed, the delisted security will trade at the conversion price, including any cash consideration. Only the units outstanding and IWF of the surviving constituents in a merger will be updated to reflect the latest information available. Index shares are then calculated to the weighting scheme above and assigned after market close on the rebalancing date. The underlying index does not account for cash distributions, as it is not a "total return" index.

#### Index Governance

An independent advisory board of MLP and energy infrastructure executives, legal partners, and other senior financial professionals reviews all methodology modifications and constituent changes. The board is comprised of a minimum of five members, all of whom must be independent.

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#### Historical Information

The graph below sets forth the information relating to the historical performance of the Reference Asset. In addition, below the graph is a table setting forth the intra-day high, intra-day low and period-end closing share prices of the Reference Asset. The information provided in this table is for the period from January 1, 2013 through December 26, 2017.

We obtained the information regarding the historical performance of the Reference Asset in the chart below from Bloomberg Financial Markets.

We have not independently verified the accuracy or completeness of the information obtained from Bloomberg Financial Markets. The historical performance of the Reference Asset should not be taken as an indication of its future performance, and no assurance can be given as to the Final Level of the Reference Asset. We cannot give you assurance that the performance of the Reference Asset will result in any positive return on your initial investment.

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Alerian MLP ETF (“AMLP”)

Period-Start Date	Period-End Date	High Intra-Day Share Price of the Reference Asset (in \$)	Low Intra-Day Share Price of the Reference Asset (in \$)	Period-End Closing Share Price of the Reference Asset (in \$)
1/1/2013	3/31/2013	17.72	16.12	17.72
4/1/2013	6/30/2013	18.14	16.75	17.85
7/1/2013	9/30/2013	18.32	17.02	17.59
10/1/2013	12/31/2013	18.03	16.96	17.79
1/1/2014	3/31/2014	17.88	17.32	17.66
4/1/2014	6/30/2014	19.00	17.67	19.00
7/1/2014	9/30/2014	19.33	18.02	19.17
10/1/2014	12/31/2014	19.26	16.01	17.52
1/1/2015	3/31/2015	17.78	16.07	16.57
4/1/2015	6/30/2015	17.33	15.53	15.56
7/1/2015	9/30/2015	16.03	11.48	12.48
10/1/2015	12/31/2015	14.24	9.55	12.05
1/1/2016	3/31/2016	12.19	7.78	10.90
4/1/2016	6/30/2016	12.95	10.25	12.72
7/1/2016	9/30/2016	13.03	11.96	12.69
10/1/2016	12/31/2016	12.75	11.78	12.60
1/1/2017	3/31/2017	13.31	12.45	12.71
4/1/2017	6/30/2017	12.89	11.06	11.96
7/1/2017	9/30/2017	12.13	10.51	11.22
10/1/2017	12/26/2017	11.45	9.79	10.86

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

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#### SUPPLEMENTAL DISCUSSION OF U.S. FEDERAL INCOME TAX CONSEQUENCES

The following disclosure supplements, and to the extent inconsistent supersedes, the discussion in the product prospectus supplement dated January 11, 2016 under “Supplemental Discussion of U.S. Federal Income Tax Consequences.”

Under Section 871(m) of the Code, a “dividend equivalent” payment is treated as a dividend from sources within the United States. Such payments generally would be subject to a 30% U.S. withholding tax if paid to a non-U.S. holder. Under U.S. Treasury Department regulations, payments (including deemed payments) with respect to equity-linked instruments (“ELIs”) that are “specified ELIs” may be treated as dividend equivalents if such specified ELIs reference an interest in an “underlying security,” which is generally any interest in an entity taxable as a corporation for U.S. federal income tax purposes if a payment with respect to such interest could give rise to a U.S. source dividend. However, the IRS has issued guidance that states that the U.S. Treasury Department and IRS intend to amend the effective dates of the U.S. Treasury Department regulations to provide that withholding on dividend equivalent payments will not apply to specified ELIs that are not delta-one instruments and that are issued before January 1, 2019. Based on our determination that the Notes are not delta-one instruments, non-U.S. holders should not be subject to withholding on dividend equivalent payments, if any, under the Notes. However, it is possible that the Notes could be treated as deemed reissued for U.S. federal income tax purposes upon the occurrence of certain events affecting the Reference Asset or the Notes, and following such occurrence the Notes could be treated as subject to withholding on dividend equivalent payments. Non-U.S. holders that enter, or have entered, into other transactions in respect of the Reference Asset or the Notes should consult their tax advisors as to the application of the dividend equivalent withholding tax in the context of the Notes and their other transactions. If any payments are treated as dividend equivalents subject to withholding, we (or the applicable withholding agent) would be entitled to withhold taxes without being required to pay any additional amounts with respect to amounts so withheld.

#### SUPPLEMENTAL PLAN OF DISTRIBUTION (CONFLICTS OF INTEREST)

Delivery of the Notes will be made against payment for the Notes on December 29, 2017, which is the third (3rd) business day following the Pricing Date (this settlement cycle being referred to as “T+3”). See “Plan of Distribution” in the prospectus dated January 11, 2016. For additional information as to the relationship between us and RBCCM, please see the section “Plan of Distribution—Conflicts of Interest” in the prospectus dated January 8, 2016.

We will deliver the Notes on a date that is greater than two business days following the trade date. Under Rule 15c6-1 of the Exchange Act, trades in the secondary market generally are required to settle in two business days, unless the parties to any such trade expressly agree otherwise. Accordingly, purchasers who wish to trade the Notes more than two business days prior to the original Issue Date will be required to specify alternative arrangements to prevent a failed settlement.

In the initial offering of the Notes, they were offered to investors at a purchase price equal to par, except with respect to certain accounts as indicated on the cover page of this document.

The value of the Notes shown on your account statement may be based on RBCCM’s estimate of the value of the Notes if RBCCM or another of our affiliates were to make a market in the Notes (which it is not obligated to do). That estimate will be based upon the price that RBCCM may pay for the Notes in light of then prevailing market conditions, our creditworthiness and transaction costs. For a period of approximately nine months after the issue date of the Notes, the value of the Notes that may be shown on your account statement may be higher than RBCCM’s estimated value of the Notes at that time. This is because the estimated value of the Notes will not include the underwriting discount and our hedging costs and profits; however, the value of the Notes shown on your account statement during that period may initially be a higher amount, reflecting the addition of RBCCM’s underwriting discount and our estimated costs and profits from hedging the Notes. This excess is expected to decrease over time

until the end of this period. After this period, if RBCCM repurchases your Notes, it expects to do so at prices that reflect their estimated value.

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We may use this pricing supplement in the initial sale of the Notes. In addition, RBCCM or another of our affiliates may use this pricing supplement in a market-making transaction in the Notes after their initial sale. Unless we or our agent informs the purchaser otherwise in the confirmation of sale, this pricing supplement is being used in a market-making transaction.

#### STRUCTURING THE NOTES

The Notes are our debt securities, the return on which is linked to the performance of the Reference Asset. As is the case for all of our debt securities, including our structured notes, the economic terms of the Notes reflect our actual or perceived creditworthiness at the time of pricing. In addition, because structured notes result in increased operational, funding and liability management costs to us, we typically borrow the funds under these Notes at a rate that is more favorable to us than the rate that we might pay for a conventional fixed or floating rate debt security of comparable maturity. Using this relatively lower implied borrowing rate rather than the secondary market rate, is a factor that reduced the initial estimated value of the Notes at the time their terms were set. Unlike the estimated value included in this pricing supplement, any value of the Notes determined for purposes of a secondary market transaction may be based on a different funding rate, which may result in a lower value for the Notes than if our initial internal funding rate were used.

In order to satisfy our payment obligations under the Notes, we may choose to enter into certain hedging arrangements (which may include call options, put options or other derivatives) on the issue date with RBCCM or one of our other subsidiaries. The terms of these hedging arrangements take into account a number of factors, including our creditworthiness, interest rate movements, the volatility of the Reference Asset, and the tenor of the Notes. The economic terms of the Notes and their initial estimated value depend in part on the terms of these hedging arrangements.

The lower implied borrowing rate is a factor that reduced the economic terms of the Notes to you. The initial offering price of the Notes also reflects the underwriting commission and our estimated hedging costs. These factors resulted in the initial estimated value for the Notes on the Pricing Date being less than their public offering price. See “Selected Risk Considerations—The Initial Estimated Value of the Notes Is Less than the Price to the Public” above.

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#### VALIDITY OF THE NOTES

In the opinion of Norton Rose Fulbright Canada LLP, the issue and sale of the Notes has been duly authorized by all necessary corporate action of the Bank in conformity with the Indenture, and when the Notes have been duly executed, authenticated and issued in accordance with the Indenture and delivered against payment therefor, the Notes will be validly issued and, to the extent validity of the Notes is a matter governed by the laws of the Province of Ontario or Québec, or the laws of Canada applicable therein, and will be valid obligations of the Bank, subject to equitable remedies which may only be granted at the discretion of a court of competent authority, subject to applicable bankruptcy, to rights to indemnity and contribution under the Notes or the Indenture which may be limited by applicable law; to insolvency and other laws of general application affecting creditors' rights, to limitations under applicable limitations statutes, and to limitations as to the currency in which judgments in Canada may be rendered, as prescribed by the Currency Act (Canada). This opinion is given as of the date hereof and is limited to the laws of the Provinces of Ontario and Québec and the federal laws of Canada applicable thereto. In addition, this opinion is subject to customary assumptions about the Trustee's authorization, execution and delivery of the Indenture and the genuineness of signatures and certain factual matters, all as stated in the letter of such counsel dated January 8, 2016, which has been filed as Exhibit 5.1 to Royal Bank's Form 6-K filed with the SEC dated January 8, 2016.

In the opinion of Morrison & Foerster LLP, when the Notes have been duly completed in accordance with the Indenture and issued and sold as contemplated by the prospectus supplement and the prospectus, the Notes will be valid, binding and enforceable obligations of Royal Bank, entitled to the benefits of the Indenture, subject to applicable bankruptcy, insolvency and similar laws affecting creditors' rights generally, concepts of reasonableness and equitable principles of general applicability (including, without limitation, concepts of good faith, fair dealing and the lack of bad faith). This opinion is given as of the date hereof and is limited to the laws of the State of New York. This opinion is subject to customary assumptions about the Trustee's authorization, execution and delivery of the Indenture and the genuineness of signatures and to such counsel's reliance on the Bank and other sources as to certain factual matters, all as stated in the legal opinion dated January 8, 2016, which has been filed as Exhibit 5.2 to the Bank's Form 6-K dated January 8, 2016.

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