



RBC Yorkville MLP Distribution Growth Leaders ETN (YGRO)

ETN Details

Ticker	YGRO
Intraday Indicative Value	YGROIV
Underlying Index	Yorkville MLP Distribution Growth Leaders Liquid PR Index
Bloomberg Index Ticker	YGMLL
Income Potential	Variable quarterly coupon
Tracking fee	.90% per annum
Primary Exchange	NYSE Arca
CUSIP/ISIN	78011D104/US78011D1046
Current Market Capitalization (\$MMs)	\$15.6

Index Statistics As of September 30, 2016

Annualized Index Yield as of 9/30/16:	6.3%
Index Total Market Capitalization (\$MMs):	\$215,450
Index Avg. MLP Market Capitalization (\$MMs):	\$8,618
Standard Deviation (1/31/14 to 9/30/16):	22.5%
Distribution Growth Rate:**	11.5%

Source: Yorkville Capital Management LLC

* Liquidity Weighted - On selection day, each Index constituent is weighted proportionally according to Yorkville's Intrinsic Liquidity measure. For Inclusion in the portfolio, all securities must have daily liquidity of at least \$4 million based on Yorkville's Intrinsic Liquidity measure and have a market capitalization of at least \$750 million on the selection day.

**Weighted average year-over-year distribution growth. 3Q16 distributions percentage change versus 3Q15.



Overview

The RBC Yorkville MLP Distribution Growth Leaders Exchange Traded Notes ("ETNs") provide access to the returns of 25 MLPs exhibiting the highest distribution growth among liquid MLPs. The ETNs pay a quarterly coupon, if any, linked to the varying cash distributions of the Index constituents, less accrued investor fees. The ETNs are unsecured debt securities issued by RBC that are linked to the return of the Yorkville MLP Distribution Growth Leaders LiquidSM PR Index (the "Index"). The ETNs are listed and trade on the NYSE Arca under the symbol **YGRO**.

Why MLP distribution growth leaders?

Historically, distribution growth has been one of the primary drivers of total return for investors in MLPs.

Index Description

The rules-based Index is comprised of the 25 MLPs exhibiting the fastest distribution growth, as measured by historic and projected distributions. The Index is liquidity weighted* and rebalanced semi-annually.

What are MLPs and why invest in them?

MLPs are publicly traded limited partnerships, a majority of which operate in the energy infrastructure market. MLPs have been and are expected to continue developing much of the United States' energy infrastructure: pipelines, terminals and other assets involved in the transmission and delivery of oil, natural gas and other energy commodities to transportation hubs. MLPs typically enter into long term contracts for the lease of these assets and therefore have lower dependency on commodity prices. MLPs have provided low correlation to a wide range of asset classes, including: equities, fixed income and commodities.

Benefits of Investing In The ETN

- **Income Potential:** Quarterly coupons, if any, will be paid based on the cash distributions of the MLPs included in the Index, less investor fees.
- **Minimal Tracking Error:** Investors receive returns based on the performance of the Index less any fees.
- **Simplified Tax Reporting:** Investors receive a Form 1099 instead of multiple K1's.

Main Risks of Investing In The ETN

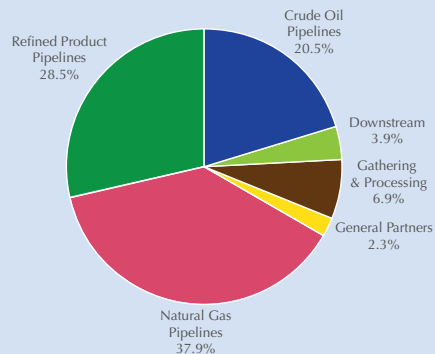
Investing in the ETNs may result in a loss. The value of the constituent MLPs and consequently the Index and ETN are subject to risks associated with the market.

The ETNs are exposed to the credit risk of RBC. The ETNs may not have an active trading market and may not continue to be listed over their term. The ETNs are subject to a maximum issuance limitation of 10,000,000 ETNs, which, among other factors, may cause the ETNs to trade at a premium to their Indicative Value. Investors that pay a premium for the ETNs may incur a substantial loss if they sell the ETNs when some or all of the premium is no longer present. The coupon payments on the ETNs will be variable and may be zero. Certain fees will reduce the potential coupons and/or the payment at maturity or upon early repurchase. The Issuer's obligation to repurchase the ETNs at the request of holder is on a daily basis, and is subject to substantial minimum size restrictions. You will not know how much you will receive upon early repurchase at the time that you elect that we repurchase your ETNs. The risks identified above are not exhaustive. You should also review carefully the related "Risk Factors" section of the pricing supplement available at www.rbcusnotes.com/etns as well as the "Selected Risk Considerations" on the third page.



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Index Sector Breakdown As of September 30, 2016



Index Top Holdings As of September 30, 2016

Enterprise Products Partners LP (EPD)	14.8%
Magellan Midstream Partners LP (MMP)	10.0%
Energy Transfer Partners LP (ETP)	9.9%
MPLX LP (MPLX)	8.2%
Buckeye Partners LP (BPL)	7.5%
Phillips 66 Partners LP (PSXP)	5.8%
Western Gas Partners LP (WES)	4.0%
Spectra Energy Partners LP (SEP)	3.9%
Tesoro Logistics LP (TLLP)	3.8%
Genesis Energy LP (GEL)	3.7%

Source: Yorkville Capital Management LLC

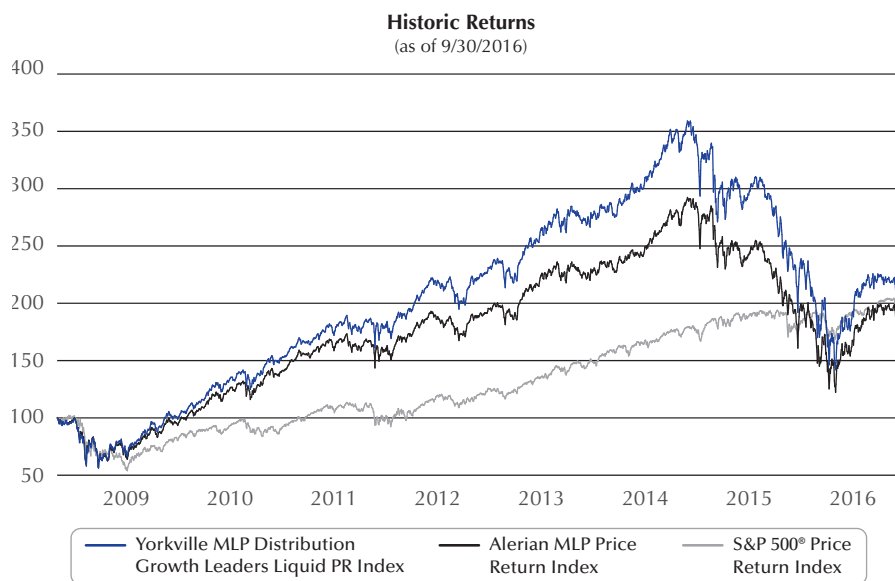
Total Return Index Statistics As of Sept. 30, 2016

Performance	YGMLL TR ¹	MLPs TR ²	S&P 500® TR ³
YTD	8.8%	15.9%	7.8%
1 Year	5.3%	12.7%	15.4%
3 Year	-7.4%	-4.8%	11.2%
5 Year	4.8%	5.0%	16.4%

Price Return Index Statistics As of Sept. 30, 2016

Performance	YGMLL PR ⁴	MLPs PR ⁵	S&P 500® PR ⁶
YTD	3.1%	8.9%	6.1%
1 Year	-2.0%	3.9%	12.9%
3 Year	-12.7%	-11.0%	8.8%
5 Year	-1.2%	-1.5%	13.9%

Index Return Comparison



Source: Bloomberg.

PAST PERFORMANCE (WHETHER RETROSPECTIVELY CALCULATED OR ACTUAL HISTORICAL) IS NOT INDICATIVE OF FUTURE RESULTS.

The graph and the Index Statistics tables with respect to the Yorkville MLP Distribution Growth Leaders Liquid PR and TR Indices reflects no deduction of the annual investor fee of .90% per annum. Additionally, price return and total returns versions of the S&P 500® Index and the Alerian Index are shown without fees as well. The performance of the Yorkville MLP Distribution Growth Leaders Liquid TR Index, the Alerian MLP TR Index and the S&P 500® TR Index include the effect of dividends. The performance of the Alerian MLP PR Index and the S&P 500® PR Index exclude the effect of dividends. Your payment at maturity or upon early repurchase of the ETNs, as more fully described in the relevant pricing supplement, is not based on the performance of these five indices, but instead is based on the performance of the Yorkville MLP Distribution Growth Leaders Liquid PR Index, which excludes dividends.

The Yorkville MLP Distribution Growth Leaders Liquid PR Index and Yorkville MLP Distribution Growth Leaders Liquid TR Index were created on January 8, 2014. Therefore, the graph and Index Statistics reflect the actual performance of the Yorkville MLP Distribution Growth Leaders Liquid PR Index and the Yorkville MLP Distribution Growth Leaders Liquid TR Index from January 8, 2014 through September 30, 2016 and reflects a retrospectively calculated Yorkville MLP Distribution Growth Leaders Liquid PR Index and Yorkville MLP Distribution Growth Leaders Liquid TR Index performance from June 30, 2008 through January 8, 2014. The hypothetical data was created by applying the methodology published by the index sponsor for each of the indices. Such retrospective data is hypothetical, not actual data, and were created with the benefit of hindsight. The data cannot accurately be used to predict future results. See "Selected Risk Considerations."

Any historical and hypothetical upward or downward trend in the level of the Index or the historical and hypothetical annualized returns during the period shown is not an indication that the level of the Yorkville MLP Distribution Growth Leaders Liquid PR Index is more or less likely to increase or decrease at any time during the term of the ETNs. The historical or hypothetical levels or annualized returns of the Yorkville MLP Distribution Growth Leaders Liquid PR Index do not give an indication of the future performance of the index. We cannot make any assurance that the future performance of the Yorkville MLP Distribution Growth Leaders Liquid PR Index will result in holders of the ETNs receiving a positive return on their investment.

(1) YGMLLTR – the Yorkville MLP Distribution Growth Leaders Liquid Total Return Index (2) MLPs TR – the Alerian MLP Total Return Index (3) the S&P 500 Total Return Index (4) YGMLL – the Yorkville MLP Distribution Growth Leaders Liquid Price Return Index (5) MLPs – the Alerian MLP Price Return Index (6) the S&P 500 Price Return Index



RBC Yorkville MLP

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About Yorkville Capital Management LLC

Yorkville Capital Management LLC (the “Index Sponsor”) is an Registered Investment Advisor (RIA) and claims compliance with the Global Investment Performance Standards (GIPS).

Selected Risk Considerations

An investment in the MLP Distribution Growth Leaders Liquid PR Index Exchange Traded Notes described herein (the “ETNs”) involves risks. Selected risks are summarized here, but we urge you to read the more detailed explanation of risks described under “Risk Factors” in the prospectus supplement and pricing supplement.

Uncertain Principal Repayment—You may receive less than the principal amount of your ETNs at maturity or upon repurchase. If the level of the Index decreases, or does not increase, by an amount equal to the percentage of the principal amount represented by the Investor Fee, minus the coupon payments, you will receive less, and possibly significantly less, than your original investment in the ETNs.

Prior to maturity, the market value of the ETNs may be influenced by many unpredictable factors — The value of the constituent MLPs and consequently the Index and ETN may fluctuate between the date you purchase them and maturity. Several factors, many of which are beyond our control, will influence the market value of the ETNs. Such factors include but are not limited to economic, financial, political, regulatory or judicial events, the supply and demand for the ETNs and the constituent MLPs, and interest and yield rates in the market generally and of the constituent MLPs. These and other factors interrelate in complex ways, and the effect of one factor on the market value of your ETNs may offset or enhance the effect of another factor.

Credit Risk of Royal Bank of Canada—The ETNs are unsecured debt obligations of the issuer, Royal Bank of Canada, and are not, either directly or indirectly, an obligation of or guaranteed by any third party. Any payments you are entitled to receive on your ETNs, including any payment at maturity or redemption, are subject to our ability to pay our obligations as they come due. As a result, the actual and perceived creditworthiness of Royal Bank of Canada will affect the market value, if any, of the ETNs prior to maturity or redemption. In addition, in the event that Royal Bank of Canada were to default on its obligations, you may not receive any amounts owed to you under the terms of the ETNs.

No Fixed Interest Payments—You will not receive any fixed periodic interest payments on the ETNs, and your quarterly Coupon Payments are uncertain and could be zero.

A Trading Market for the ETNs May Not Continue Over the Term of the ETNs—The ETNs are listed on NYSE Arca under the symbol “YGRO”. However, a trading market for your ETNs may not continue for their term. We are not required to maintain any listing of the ETNs on NYSE Arca or any other exchange or quotation system.

The intraday indicative value and the closing indicative value are not the same as the closing price or any other trading price of the ETNs in the secondary market—The closing indicative value will be published on each Index Business Day under the Bloomberg ticker symbol “YGROIV”. The Intraday Indicative Value of the ETNs is based on the most recent intraday level of the Index and will be calculated and published every 15 seconds on each Trading Day during normal trading hours under the Bloomberg ticker symbol “YGROIV” and will be disseminated over the consolidated tape, or other major market vendor. The trading price of the ETNs at any time is the price at which you may be able to sell your ETNs in the secondary market at such time, if one exists. The trading price of the ETNs at any time may vary significantly from their Intraday Indicative Value at such time.

Call Feature—Your ETNs may be repurchased on or after January 29, 2015 at our option and without your consent. In the event that we call the ETNs, the daily repurchase value may be significantly less than the stated principal amount of the ETNs or the price at which you purchased your ETNs.

Restrictions on Repurchases by Us—You must offer the applicable minimum principal repurchase amount of \$1,000,000 (50,000 ETNs) to us for your offer for repurchase to be considered.

Hypothetical back-tested levels of the Index are limited and should not be taken as an indication of its future performance during the term of the ETNs—It is impossible to predict whether the level of the Index will rise or fall. The actual performance of the Index over the term of the ETNs, as well as the amount of any Coupon Payments you may receive and any amount payable at maturity or upon earlier repurchase, may bear little relation to the hypothetical back-tested levels of the Index. Moreover, because the Index began publishing on January 8, 2014, there is minimal actual historical information for you to consider in making an independent investigation of the Index. The hypothetical back-tested Index performance information that has been calculated by the Index Sponsor and included in this document is subject to significant limitations, including the fact that the Index Sponsor had the benefit of hindsight both in developing the Index methodology and in calculating the hypothetical back-tested Index Levels, and the fact that the hypothetical back-tested Index Levels were calculated in a manner that differed from the Index methodology in certain respects, as described in “The Index- Hypothetical Historical and Actual Historical Data on the Index” in the pricing supplement. If the hypothetical back-tested Index Levels were calculated based on different assumptions or if the modifications to the Index methodology described in that section were not made, or if the hypothetical back-tested levels covered a longer or different time period, the hypothetical back-tested performance of the Index might look materially different.

Tax Treatment—Significant aspects of the tax treatment of the ETNs may be less favorable than a direct investment in MLPs and are uncertain. You should consult with your own tax advisor about your own tax situation.

Royal Bank of Canada, and its affiliates, and Yorkville Capital Management LLC do not provide tax advice, and nothing contained herein should be construed as tax advice. Accordingly, you should seek advice based on your particular circumstances from your independent tax advisor.



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About RBC Capital Markets

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All disclosure contained in this document regarding the Index, including, without limitation, its make-up, performance and method of calculation, and the Index Sponsor has been derived from publicly available information prepared by the Index Sponsor. We have not independently verified the accuracy, completeness, or adequacy, of such information. We are not responsible for the calculation, maintenance or publication of the Index.

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Royal Bank of Canada has filed a registration statement (including a pricing supplement, a prospectus supplement and a prospectus) with the SEC for the offering to which this free writing prospectus relates. Before you invest, you should read those documents and the other documents relating to this offering that we have filed with the SEC for more complete information about us and this offering. You may obtain these documents without cost by visiting EDGAR on the SEC Website at www.sec.gov. Alternatively, Royal Bank of Canada, any agent or any dealer participating in this offering will arrange to send you the pricing supplement, the prospectus supplement and the prospectus if you so request by calling toll-free at 1-866-609-6009.