## Pricing Supplement to Short Form Base Shelf Prospectus dated March 25, 2022, the Prospectus Supplement thereto dated March 28, 2022, as supplemented November 11, 2022 and the Prospectus Supplement thereto dated March 28, 2022, as supplemented November 11, 2022

No securities regulatory authority has expressed an opinion about these securities and it is an offence to claim otherwise.

This pricing supplement together with the short form base shelf prospectus dated March 25, 2022, the prospectus supplement dated March 28, 2022 and the prospectus supplement dated March 28, 2022, to which it relates, as amended or supplemented, and each document incorporated by reference into such prospectus, constitutes a public offering of these securities only in those jurisdictions where they may be lawfully offered for sale and therein only by persons permitted to sell such securities.

The securities to be issued hereunder have not been, and will not be, registered under the United States Securities Act of 1933, as amended and, subject to certain exceptions, may not be offered, sold or delivered, directly or indirectly, in the United States of America or for the account or benefit of U.S. persons.

February 13, 2023



Royal Bank of Canada Senior Note Program Equity Linked Securities Maximum \$20,000,000 (200,000 Securities) RBC Energy Basket Callable Yield 14.50% Securities (CAD), Series 668 Due February 26, 2030 Non-Principal Protected Securities

Royal Bank of Canada (the "**Bank**") is offering up to \$20,000,000 of RBC Energy Basket Callable Yield 14.50% Securities (CAD), Series 668 (which we refer to as the "**Securities**" for the purpose of this pricing supplement only and not for the purpose of the "base shelf prospectus" as defined below), designed for investors who are prepared and can afford to take the risk that they will lose substantially all of their investment, that regular Interest Payments (defined herein) will not be made on the Securities, and that the Securities will be redeemed early, because they believe that the Portfolio Value (defined herein) will be greater than or equal to the Coupon Barrier Value (defined herein) but less than the Autocall Redemption Value (defined herein) on each Observation Date (defined herein). Payment at maturity (if no early redemption has occurred) will be based on the price performance of the common shares of the three Canadian energy companies listed in Appendix A. Holders of the Securities will also receive Interest Payments payable monthly on each Interest Payment Date (defined herein) each at a fixed amount of \$1.2083 per Security if there is a Digital Payout Event (defined herein) on the immediately preceding Observation Date. The return on the Securities is limited; even if a Digital Payout Event occurs on each Observation Date, the Securities are not redeemed prior to maturity and the Final Portfolio Value is greater than or equal to the Protection Barrier Value, the maximum return on the Securities would be equal to \$101.50 per Security.

The Portfolio (defined herein) is notional only, meaning that the Underlying Securities (defined herein) in the Portfolio will be used solely as a reference to calculate the amount payable on the Securities. Holders of Securities do not have an ownership interest or other interest (including, without limitation, redemption rights (if any), voting rights or rights to receive dividends or other distributions) in the shares in the Portfolio and will only have a right against the Bank to be paid any amounts due under the Securities. All actions (e.g., purchases, sales and liquidations, etc.) taken in connection with the Portfolio are notional actions only.

The initial estimated value of the Securities as of February 7, 2023 was \$95.50 per Security, which is less than the price to the public and is not an indication of the actual profit to the Bank or its affiliates. The actual value of the Securities 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. See "Risk Factors" and "Preparation of Initial Estimated Value".

The Securities are described in this pricing supplement delivered together with our short form base shelf prospectus dated March 25, 2022 (the "**base shelf prospectus**"), the prospectus supplement establishing our Senior Note Program dated March 28, 2022, as supplemented November 11, 2022 (the "**program supplement**") and a prospectus supplement which generally describes equity, unit and debt linked securities that we may offer under our Senior Note Program dated March 28, 2022, as supplemented November 11, 2022 (the "**program supplement**").

The Securities are not fixed income securities and are not designed to be alternatives to fixed income or money market instruments. The Securities are structured products that possess downside risk.

The Securities will not constitute deposits insured under the Canada Deposit Insurance Corporation Act.

An investment in the Securities involves risks. An investment in the Securities is not the same as a direct investment in the securities that comprise the Portfolio and investors have no rights with respect to the securities in the Portfolio. The Securities are considered to be "specified derivatives" under applicable Canadian securities laws. If you purchase Securities, you will be exposed to fluctuations in interest rates and changes in the Portfolio Value, among other factors. Price changes may be volatile and an investment in the Securities may be considered to be speculative. Since the Securities are not principal protected and the Principal Amount (defined herein) will be at risk, you could lose substantially all of your investment. See "Risk Factors".

# Price: \$100 per Security Minimum Subscription: \$5,000 (50 Securities)

		Selling Commissions and	d
	Price to public	Dealer's fee <sup>(1)</sup>	Net proceeds to the Bank
Per Security	\$100.00	\$3.00	\$97.00
Total <sup>(2)</sup>	\$20,000,000	\$600,000	\$19,400,000

(1) A commission of 3.00% of the Principal Amount of Securities issued under this offering will be paid to the Dealers (defined below) for further payment to representatives, including representatives employed by the Dealers, whose clients purchase the Securities. An agency fee will also be paid, from the Bank's own funds, to Raymond James Ltd. in an amount up to 0.15% of the Principal Amount of the Securities issued under this offering for acting as independent agent.

(2) Reflects the maximum offering size of the Securities. There is no minimum amount of funds that must be raised under this offering. This means that the issuer could complete this offering after raising only a small proportion of the offering amount set out above.

The Securities are offered severally by RBC Dominion Securities Inc. ("**RBC DS**") and Raymond James Ltd. (collectively, the "**Dealers**") as agents under a dealer agreement dated March 28, 2022, as amended or supplemented from time to time. **RBC DS is our wholly owned subsidiary. Consequently, we are a related and connected issuer of RBC DS within the meaning of applicable securities legislation.** See "Dealers" in this pricing supplement and "Plan of Distribution" in the program supplement.

The Securities will not be listed on any stock exchange. Securities may be resold using the Fundserv network at a price determined at the time of sale by the Calculation Agent (defined herein), which price may be lower than the Principal Amount of such Securities. The Securities will also be subject to specified early trading charges, depending on when the Securities are sold. There is no assurance that a secondary market for the Securities will develop or be sustained. See "Secondary Market for Securities", "Description of the Securities–Calculation Agent" and "Risk Factors" in the program supplement and "Secondary Market" in this pricing supplement.

## **Bank Trademarks**

Lion & Globe symbol is a registered trademark of Royal Bank of Canada.

#### **Prospectus for Securities**

Securities described in this pricing supplement will be issued under our Senior Note Program and will be unsecured, unsubordinated debt obligations. The Securities are Senior Debt Securities (as defined in the base shelf prospectus referred to below) and are described in four separate documents: (1) the base shelf prospectus, (2) the program supplement, (3) the product supplement, and (4) this pricing supplement, all of which collectively constitute the "prospectus" for the Securities. See "Prospectus for Securities" in the program supplement.

#### **Documents Incorporated by Reference**

This pricing supplement is deemed to be incorporated by reference into the base shelf prospectus solely for the purpose of our Senior Note Program and the Securities issued hereunder. Other documents are also incorporated or deemed to be incorporated by reference into the base shelf prospectus and reference should be made to the base shelf prospectus for full particulars.

#### **Marketing Materials**

The version of the summary for the Securities that was filed with the securities commissions or similar regulatory authorities in each of the provinces and territories of Canada as "marketing materials" (as defined in National Instrument 41-101 – *General Prospectus Requirements*) on February 13, 2023 is deemed to be incorporated by reference into the base shelf prospectus solely for the purpose of our Senior Note Program and the Securities issued hereunder. Any version of marketing materials filed with the securities commission or similar regulatory authority in each of the provinces and territories of Canada in connection with this offering after the date hereof but prior to the termination of the distribution of the Securities under this pricing supplement (including any amendments to, or an amended version of, the marketing materials) is deemed to be incorporated by reference herein and in the base shelf prospectus solely for the purpose of our Senior Note Program and the securities under this pricing is supplement or the base shelf prospectus solely for the purpose of our Senior Note Program and the securities of the marketing materials) is deemed to be incorporated by reference herein and in the base shelf prospectus solely for the purpose of our Senior Note Program and the Securities issued hereunder. Any such marketing materials are not part of this pricing supplement or the base shelf prospectus to the extent that the contents of the marketing materials have been modified or superseded by a statement contained in an amendment to this pricing supplement.

#### **Caution Regarding Forward-Looking Statements**

From time to time, we make written or oral forward-looking statements within the meaning of certain securities laws, including the "safe harbour" provisions of the United States Private Securities Litigation Reform Act of 1995 and any applicable Canadian securities legislation. We may make forward-looking statements in the base shelf prospectus and in the documents incorporated by reference therein, in the program supplement, in the product supplement, in this pricing supplement, in other filings with Canadian regulators or the United States Securities and Exchange Commission, in other reports to shareholders, and in other communications. Forward-looking statements in, or incorporated by reference in, this prospectus include, but are not limited to, statements relating to our financial performance objectives, vision and strategic goals, the Economic, market and regulatory review and outlook section of our management's discussion and analysis for the year ended October 31, 2022 (the "2022 Management's Discussion and Analysis") for Canadian, U.S., U.K., European and global economies, the regulatory environment in which we operate, the impact from rising interest rates, the expected closing of the transaction involving HSBC Bank Canada, the Strategic priorities and Outlook sections in the 2022 Management's Discussion and Analysis for each of our business segments, the risk environment including our credit risk, market risk, liquidity and funding risk, the direction of the coronavirus (COVID-19) pandemic and its potential impact on our business operations, financial results, condition and objectives and on the global economy and financial market conditions, our climate- and sustainability-related beliefs, targets and goals (including our net-zero and sustainable finance commitments), and includes our President and Chief Executive Officer's statements. The forward-looking information contained in, or incorporated by reference in, this prospectus is presented for the purpose of assisting the holders of our securities and financial analysts in understanding our financial position and results of operations as at and for the periods ended on the dates presented, as well as our financial performance objectives, vision and strategic goals, and may not be appropriate for other purposes. Forward-looking statements are typically identified by words such as "believe", "expect", "foresee", "forecast", "anticipate", "intend", "estimate", "goal", "commit", "target", "objective", "plan" and "project" and similar expressions of future or conditional verbs such as "will", "may", "might", "should", "could" or "would".

By their very nature, forward-looking statements require us to make assumptions and are subject to inherent risks and uncertainties, which give rise to the possibility that our predictions, forecasts, projections, expectations or conclusions will not prove to be accurate, that our assumptions may not be correct, that our financial performance, environmental & social or other objectives, vision and strategic goals will not be achieved, and that our actual results may differ materially from such predictions, forecasts, projections, expectations or conclusions. We caution readers not to place undue reliance on these statements as a number of risk factors could cause our actual results to differ materially from the expectations expressed in such forward-looking statements. These factors – many of which are beyond our control and the effects of which can be difficult to predict – include: credit, market, liquidity and funding, insurance, operational, regulatory compliance (which could lead to

us being subject to various legal and regulatory proceedings, the potential outcome of which could include regulatory restrictions, penalties and fines), strategic, reputation, competitive, model, legal and regulatory environment, systemic risks and other risks discussed in the risk sections of the 2022 Management's Discussion and Analysis incorporated by reference herein; including business and economic conditions in the geographic regions in which we operate, Canadian housing and household indebtedness, information technology and cyber risks, geopolitical uncertainty, environmental and social risk (including climate change), digital disruption and innovation, privacy, data and third-party related risks, regulatory changes, culture and conduct risks, the effects of changes in government fiscal, monetary and other policies, tax risk and transparency, and the emergence of widespread health emergencies or public health crises such as pandemics and epidemics, including the COVID-19 pandemic and its impact on the global economy, financial market conditions and our business operations, and financial results, condition and objectives. Additional factors that could cause actual results to differ materially from the expectations in such forward-looking statements can be found in the risk section of the 2022 Management's Discussion and Analysis.

We caution that the foregoing list of risk factors is not exhaustive and other factors could also adversely affect our results. When relying on our forward-looking statements to make decisions with respect to us or the Securities, investors and others should carefully consider the foregoing factors and other uncertainties and potential events. Material economic assumptions underlying the forward-looking statements contained in this prospectus are set out in the Economic, market and regulatory review and outlook section and for each business segment under the Strategic priorities and Outlook headings in our 2022 Management's Discussion and Analysis. Except as required by law, we do not undertake to update any forward-looking statement, whether written or oral, that may be made from time to time by us or on our behalf.

Additional information about these and other factors can be found in the risk sections of the 2022 Management's Discussion and Analysis incorporated by reference in this prospectus.

	Royal Bank of Canada Senior Note Program Equity Linked Securities Maximum \$20,000,000 (200,000 Securities) Basket Callable Yield 14.50% Securities (CAD), Series 668 Due February 26, 2030 Non-Principal Protected Securities
Issuer:	Royal Bank of Canada (the " <b>Bank</b> ")
Dealers:	RBC Dominion Securities Inc. ("RBC DS") and Raymond James Ltd.
	Raymond James Ltd., a dealer to which we are neither related nor connected, participated in the due diligence activities performed by the Dealers in respect of the offering, but did not participate in the structuring and pricing of the offering or the calculation of the initial estimated value of the Securities. See "Plan of Distribution" in the program supplement.
Issue:	RBC Energy Basket Callable Yield 14.50% Securities (CAD), Series 668 due February 26, 2030.
Fundserv Code:	RBC7868
Objective of the Securities:	The Securities have been designed for investors who are prepared and can afford to take the risk that they will lose substantially all of their investment, that regular Interest Payments (defined below) will not be made on the Securities, and that the Securities will be redeemed early, because they believe that the Portfolio Value (defined below) will be greater than or equal to the Coupon Barrier Value (defined below) but less than the Autocall Redemption Value (defined below) on each Observation Date (defined below) and that the Final Portfolio Value (defined below) will be greater than or equal to the Protection Barrier Value (defined below). Holders of the Securities will receive an Interest Payment on each Interest Payment Date (defined below) for which a Digital Payout Event (defined below) occurred on the immediately preceding Observation Date.
Issue Price:	The Securities will be issued at a price equal to their Principal Amount (defined below).
Minimum Investment:	50 Securities or \$5,000.
Denomination:	Securities are issuable in denominations of \$100 (the " <b>Principal Amount</b> ") and in minimum increments of \$100.
Issue Date:	February 27, 2023 or such other date as may be agreed to by the Bank and the Dealers.
Issue Size:	The maximum issue size will be an aggregate amount of \$20,000,000.
Maturity Date:	February 26, 2030 (approximately a seven-year term), subject to earlier redemption on an Autocall Redemption Event (defined below) or earlier repayment in full on an Extraordinary Event. See "Description of the Equity, Unit and Debt Linked Securities – Maturity Date and Amount Payable" in the product supplement.
Principal at Risk Securities:	All but 1% of the Principal Amount of the Securities is fully exposed. You could lose substantially all of your investment. See "Description of the Equity, Unit and Debt Linked Securities — Principal at Risk Securities" and "Risk Factors" in the product supplement.
Underlying Securities:	The return on the Securities is linked to the price performance (excluding any dividends and other distributions) of a notional portfolio (the " <b>Portfolio</b> ") of the common shares (the " <b>Underlying Securities</b> " and each, an " <b>Underlying Security</b> ") of the three Canadian energy companies listed in Appendix A (the " <b>Underlying Security Issuers</b> " and each, an " <b>Underlying Security Issuers</b> "). The Underlying Securities will be equally weighted in the Portfolio (the " <b>Portfolio Weight</b> ") at the Initial Valuation Date. Such weightings will not be adjusted or rebalanced during the term of the Securities.

Securities do not represent an interest in the Underlying Securities, and holders will have no right or entitlement to the Underlying Securities, including, without limitation, redemption rights (if any), voting rights or rights to receive dividends or other distributions paid on any of such Underlying Securities (the annual dividend yield on the Portfolio as of February 7, 2023 was 3.92%, representing an aggregate dividend yield of approximately 30.90% compounded annually over the seven-year term, on the assumption that the dividend yield remains constant). There is no requirement for the Bank to hold any interest in the Underlying Security Issuers.

This pricing supplement has been prepared for the sole purpose of assisting prospective investors in making an investment decision with respect to the Securities. This pricing supplement relates only to the Securities offered hereby and does not relate to the Underlying Securities and/or the Underlying Security Issuers. Additional information relating to the Underlying Securities and/or the Underlying Security Issuers can be obtained from the public disclosure filed by the Underlying Security Issuers on www.sedar.com or other publicly available sources. The Bank and the Dealers have not verified the accuracy or completeness of any information pertaining to the Underlying Security Issuers or determined if there has been any omission by any Underlying Security Issuer to disclose any facts, information or events which may have occurred prior to or subsequent to the date as of which any information has been furnished by any Underlying Security Issuer which may affect the significance or accuracy of such information. Neither the Bank nor any Dealer makes any representation that such publicly available documents or any other publicly available information regarding any Underlying Securities or Underlying Security Issuer are accurate or complete. See Appendix A for information concerning the market price and certain other information regarding the common shares of each of the Underlying Security Issuers on the Toronto Stock Exchange (the "TSX"). Prospective investors should independently investigate the Underlying Security Issuers and decide whether an investment in the Securities is appropriate. None of the Underlying Security Issuers have participated in the preparation of this pricing supplement and the Securities are not in any way sponsored, endorsed, sold or promoted by the Underlying Security Issuers. See "Description of the Equity, Unit and Debt Linked Securities - Underlying Securities and Underlying Security Issuers" in the product supplement.

The decision to offer the Securities pursuant to this supplement will have been taken independently of any decision by the Bank to purchase the Underlying Securities in the primary or secondary market. Except with respect to any hedging activities the Bank engages with respect to its obligations under the Securities, any decision by the Bank to purchase the Underlying Securities in the primary or in the secondary market will have been taken independently of the Bank's offering of the Securities pursuant to this supplement. The employees responsible for the Bank's Senior Note Program are not privy to any information regarding either primary or secondary market purchases of the Underlying Securities made by the Bank in connection with any primary distribution made by the Underlying Security Issuers.

Portfolio Value:The "Portfolio Value" for the Portfolio on any Exchange Day (defined in the product<br/>supplement) is calculated by: (a) multiplying (i) the official closing price of each<br/>Underlying Security, as announced by the TSX, on such Exchange Days by (ii) the<br/>corresponding Number of Underlying Securities (defined below) for such Underlying<br/>Security; and (b) aggregating the resulting products.

The "**Number of Underlying Securities**" for each Underlying Security is calculated by: (i) multiplying the Portfolio Weight for such Underlying Security by the aggregate Principal Amount of Securities issued under this offering; and (ii) dividing the resulting product by the official closing price of such Underlying Security, as announced by the TSX, on the Initial Valuation Date.

Once determined, the Number of Underlying Securities for each Underlying Security will not be adjusted during the term of the Securities, except in certain special circumstances. See "Extraordinary Events" below.

**Protection Barrier Value:** 

Number of Underlying

Securities:

The "Protection Barrier Value" is 70.00% of the Initial Portfolio Value.

Initial Portfolio Value:	The <b>"Initial Portfolio Value"</b> is the Portfolio Value on February 21, 2023 (the <b>"Initial Valuation Date"</b> ).					
<b>Coupon Barrier Value:</b>	The "Coupon Barrier Value" is 70.00% of the Initial Portfolio Value.					
Final Portfolio Value:	The "Final Portfolio Value" is the Portfolio Value on February 21, 2030 (the "Final Valuation Date").					
Percentage Change:	The " <b>Percentage Change</b> decimal places, equal to:	e" is the amount, expressed as a percentage rounded to two				
	<u>(Final</u>	Portfolio Value - Initial Portfolio Value)				
		Initial Portfolio Value				
	Amount Payable" in the p	quity, Unit and Debt Linked Securities — Maturity Date and roduct supplement.				
Observation Dates:	An " <b>Observation Date</b> " for the purposes of determining the amount of any Intere Payment will occur monthly on the dates specified below in each year that the Securities are outstanding, from and including March 21, 2023 to and including February 21, 2030. If any such Observation Date is not an Exchange Day, it shall be postponed to the next succeeding Exchange Day.					
	Provided that the Securit Bank intends the Observa	ies are not redeemed by the Bank as described below, the tion Dates to be:				
	March 21, 2023	April 21, 2023				
	May 23, 2023	June 21, 2023				
	July 21, 2023	August 21, 2023				
	September 21, 2023	October 23, 2023				
	November 21, 2023	December 21, 2023				
	January 22, 2024	February 21, 2024				
	March 21, 2024	April 22, 2024				
	May 21, 2024	June 21, 2024				
	July 22, 2024	August 21, 2024				
	September 23, 2024	October 21, 2024				
	November 21, 2024	December 23, 2024				
	January 21, 2025	February 21, 2025				
	March 21, 2025	April 21, 2025				
	May 21, 2025	June 23, 2025				
	July 21, 2025	August 21, 2025				
	September 22, 2025	October 21, 2025				
	November 21, 2025	December 22, 2025				
	January 21, 2026	February 23, 2026				
	March 23, 2026	April 21, 2026				
	May 21, 2026	June 22, 2026				
	July 21, 2026	August 21, 2026				
	September 21, 2026	October 21, 2026				
	November 23, 2026	December 21, 2026				
	January 21, 2027	February 22, 2027				
	March 22, 2027	April 21, 2027				

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	May 21, 2027	June 21, 2027
	July 21, 2027	August 23, 2027
	September 21, 2027	October 21, 2027
	November 22, 2027	December 21, 2027
	January 21, 2028	February 22, 2028
	March 21, 2028	April 21, 2028
	May 23, 2028	June 21, 2028
	July 21, 2028	August 21, 2028
	September 21, 2028	October 23, 2028
	November 21, 2028	December 21, 2028
	January 22, 2029	February 21, 2029
	March 21, 2029	April 23, 2029
	May 22, 2029	June 21, 2029
	July 23, 2029	August 21, 2029
	September 21, 2029	October 22, 2029
	November 21, 2029	December 21, 2029
	January 21, 2030	February 21, 2030
Interest Payment Dates:	the dates specified below including March 24, 202	<b>Date</b> " for an Interest Payment, if any, will occur monthly on in each year that the Securities are outstanding, from and 3 to and including February 26, 2030. Provided that the hed by the Bank as described below, the Bank intends the be:
	March 24, 2023	April 26, 2023
	May 26, 2023	June 26, 2023
	July 26, 2023	August 24, 2023
	September 26, 2023	October 26, 2023
	November 24, 2023	December 28, 2023
	January 25, 2024	February 26, 2024
	March 26, 2024	April 25, 2024
	May 24, 2024	June 26, 2024
	July 25, 2024	August 26, 2024
	September 26, 2024	October 24, 2024
	November 26, 2024	December 30, 2024
	January 24, 2025	February 26, 2025
	March 26, 2025	April 24, 2025
	May 26, 2025	June 26, 2025
	July 24, 2025	August 26, 2025
	September 25, 2025	October 24, 2025
	November 26, 2025	December 29, 2025
	January 26, 2026	February 26, 2026
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March 26, 2026	April 24, 2026
May 26, 2026	June 25, 2026
July 24, 2026	August 26, 2026
September 24, 2026	October 26, 2026
November 26, 2026	December 24, 2026
January 26, 2027	February 25, 2027
March 25, 2027	April 26, 2027
May 27, 2027	June 24, 2027
July 26, 2027	August 26, 2027
September 24, 2027	October 26, 2027
November 25, 2027	December 24, 2027
January 26, 2028	February 25, 2028
March 24, 2028	April 26 2028
Waren 24, 2020	April 26, 2028
May 26, 2028	June 26, 2028
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May 26, 2028	June 26, 2028
May 26, 2028 July 26, 2028	June 26, 2028 August 24, 2028
May 26, 2028 July 26, 2028 September 26, 2028	June 26, 2028 August 24, 2028 October 26, 2028
May 26, 2028 July 26, 2028 September 26, 2028 November 24, 2028	June 26, 2028 August 24, 2028 October 26, 2028 December 28, 2028
May 26, 2028 July 26, 2028 September 26, 2028 November 24, 2028 January 25, 2029	June 26, 2028 August 24, 2028 October 26, 2028 December 28, 2028 February 26, 2029
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May 26, 2028 July 26, 2028 September 26, 2028 November 24, 2028 January 25, 2029 March 26, 2029 May 25, 2029 July 26, 2029 September 26, 2029	June 26, 2028 August 24, 2028 October 26, 2028 December 28, 2028 February 26, 2029 April 26, 2029 June 26, 2029 August 24, 2029 October 25, 2029

The final Interest Payment, if any, will be made on the earlier of the Autocall Redemption Date (defined below) (if applicable) and the Maturity Date.

**Interest Payments:** 

Redemption Date (defined below) (if applicable) and the Maturity Date. Interest payments (the "**Interest Payments**" and each, an "**Interest Payment**"), if any,

on the Securities will be payable on each Interest Payment Date, in arrears, at a fixed interest rate of 1.2083% monthly ending on an Interest Payment Date (an "Interest Period") for each Interest Period in which a Digital Payout Event occurs on the Observation Date occurring in the Interest Period. On the basis of the foregoing, the interest on each \$100 Principal Amount of Securities for an Interest Period in which a Digital Payout Event has occurred would equal \$100 × 1.2083%.

Thus, if a Digital Payout Event occurs:

(a) on each Observation Date in any twelve-month period, the amount of interest payable on each \$100 Principal Amount of Securities for that twelve-month period will be \$14.50;

(b) on eleven out of the twelve Observation Dates in any twelve-month period, the amount of interest payable on each \$100 Principal Amount of Securities for that twelve-month period will be \$13.2913;

(c) on ten out of the twelve Observation Dates in any twelve-month period, the amount of interest payable on each \$100 Principal Amount of Securities for that twelve-month period will be \$12.083;

	(d) on nine out of the twelve Observation Dates in any twelve-month period, the amount of interest payable on each \$100 Principal Amount of Securities for that twelve-month period will be \$10.8747;
	(e) on eight out of the twelve Observation Dates in any twelve-month period, the amount of interest payable on each \$100 Principal Amount of Securities for that twelve-month period will be \$9.6664;
	(f) on seven out of the twelve Observation Dates in any twelve-month period, the amount of interest payable on each \$100 Principal Amount of Securities for that twelve-month period will be \$8.4581;
	(g) on six out of the twelve Observation Dates in any twelve-month period, the amount of interest payable on each \$100 Principal Amount of Securities for that twelve-month period will be \$7.2498;
	(h) on five out of the twelve Observation Dates in any twelve-month period, the amount of interest payable on each \$100 Principal Amount of Securities for that twelve-month period will be \$6.0415;
	(i) on four out of the twelve Observation Dates in any twelve-month period, the amount of interest payable on each \$100 Principal Amount of Securities for that twelve-month period will be \$4.8332;
	(j) on three out of the twelve Observation Dates in any twelve-month period, the amount of interest payable on each \$100 Principal Amount of Securities for that twelve-month period will be \$3.6249;
	(k) on two out of the twelve Observation Dates in any twelve-month period, the amount of interest payable on each \$100 Principal Amount of Securities for that twelve-month period will be \$2.4166; and
	(l) on one out of the twelve Observation Dates in any twelve-month period, the amount of interest payable on each \$100 Principal Amount of Securities for that twelve-month period will be \$1.2083.
	If a Digital Payout Event does not occur on the Observation Date during a particular Interest Period, no interest will be payable on the Securities for such Interest Period.
Digital Payout Event:	A " <b>Digital Payout Event</b> " will occur if, on the relevant Observation Date, the Portfolio Value is greater than or equal to the Coupon Barrier Value. RBC DS intends to publish whether there has been a Digital Payout Event on each Observation Date on its website at www.rbcnotes.com.
Autocall Redemption Event:	An "Autocall Redemption Event" will occur if the Portfolio Value on an Observation Date other than the first, second, third, fourth, fifth and last Observation Dates is greater than or equal to 110.00% of the Initial Portfolio Value (the "Autocall Redemption Value"). On the next succeeding Interest Payment Date following the occurrence of an Autocall Redemption Event (the "Autocall Redemption Date") the Securities will be redeemed for an amount equal to the Principal Amount thereof (the "Autocall Redemption Amount"). In addition to the Autocall Redemption Amount, an Interest Payment will be paid on the Autocall Redemption Date.
Payment at Maturity:	On the Maturity Date, if the Securities have not been previously redeemed, the amount payable (the " <b>Final Redemption Amount</b> ") for each \$100 Principal Amount per Security will be equal to:
	(a) if the Final Portfolio Value is greater than or equal to the Protection Barrier Value, \$100; or
	(b) if the Final Portfolio Value is less than the Protection Barrier Value, an amount equal to:
	\$100.00 + (\$100.00 × Percentage Change)
	As a result, the Final Redemption Amount will not be determinable before the Final Valuation Date. See "Risk Factors" below.
	In addition to the Final Redemption Amount, an Interest Payment will be paid on the Maturity Date if a Digital Payout Event occurs on the Final Valuation Date. All dollar

amounts will be rounded to the nearest whole cent. The minimum payment at maturity is \$1.00. Sample Calculations: See Appendix B to this pricing supplement for sample calculations of the Final Redemption Amount or Autocall Redemption Amount (in the event of an Autocall Redemption Event) and any Interest Payments payable on the Securities at or prior to (in the event of an Autocall Redemption Event) the Maturity Date. **Issuer Credit Rating:** Moodv's: Aa1 Standard & Poor's: AA-DBRS: AA The Securities themselves have not been and will not be rated. See "Description of the Securities — Ratings" in the program supplement. Determination of the Portfolio Value, including the Initial Portfolio Value and/or the **Extraordinary Events:** Final Portfolio Value, and the Final Redemption Amount may be postponed, or the Bank can accelerate determination of the Final Portfolio Value and the Final Redemption Amount and repay the Securities in full prior to their maturity, in certain circumstances. If an Extraordinary Event occurs then the Calculation Agent may, but is not required to, make such adjustments to any payment or other term of the Securities as it determines to be appropriate, acting in good faith, to account for the economic effect of such event on the Securities and determine the effective date of any such adjustment. See "Description of the Securities - Special Circumstances" in the program supplement and "Description of the Equity, Unit and Debt Linked Securities - Extraordinary Events" in the product supplement. **Summary of Fees and Expenses:** A commission of 3.00% of the Principal Amount of Securities issued under this offering will be paid to the Dealers for further payment to representatives, including representatives employed by the Dealers, whose clients purchase the Securities. An agency fee will also be paid, from the Bank's own funds, to Raymond James Ltd. in an amount up to 0.15% of the Principal Amount of the Securities issued under this offering for acting as independent agent. The selling commissions and the agency fee are indirectly borne by holders of the Securities. There are no fees directly payable by a holder of Securities. See "Description of the Securities - Summary of Fees and Expenses" in the program supplement. An early trading charge may also apply. See "Secondary Market" below. Eligible for RRSPs, RRIFs, RESPs, RDSPs, DPSPs and TFSAs. See "Eligibility for **Eligibility for Investment:** Investment" in Appendix C, including the summary of the "prohibited investment" rule. **Risk Factors:** You should carefully consider all the information set out in this prospectus for any Securities in which you are considering investing. In particular, you should evaluate the risks described under "Risk Factors" in each of the base shelf prospectus and the product supplement, as well as the risks described below. The return on the Securities is unknown and subject to many variables, including interest rate fluctuations and changes in the prices of the Underlying Securities. You should independently determine, with your own advisors, whether an investment in the Securities is suitable for you having regard to your own investment objectives and expectations. *Limited Upside Participation by the Securities* The return on the Securities is limited; even if the Portfolio Value is greater than the Coupon Barrier Value but less than the Autocall Redemption Value on each Observation Date and the Final Portfolio Value is greater than or equal to the Protection Barrier Value, the maximum return on the Securities would be equal to \$101.50 per Security. The Securities will not participate in any upside performance of

the Underlying Securities.

#### Lack of Diversification

The Underlying Security Issuers are Canadian energy companies and are therefore concentrated in this industry sector. This means that the performance of the Securities will be tied entirely to the success of this industry sector. Canadian energy companies are subject to risks that are specific to their industry sector and which may therefore result in the performance of the Securities being substantially different, and potentially substantially worse, than other industry sectors or the securities/equity markets generally.

#### Uncertain Return until Final Valuation Date

The return, if any, on the Securities will be uncertain until the Final Valuation Date, unless the Securities are called for redemption prior to the Final Valuation Date. Whether there is a return on the Securities will depend on the Portfolio Value on the Observation Dates and the Final Valuation Date. No Interest Payment will be made on an Interest Payment Date unless there is a Digital Payout Event on the immediately preceding Observation Date. There can be no assurance that the Securities will generate a positive return or that the objectives of the Securities will be achieved. Holders of the Securities may not be repaid the amount they invested in the Securities (other than \$1.00 per Security), depending on the price performance of the Underlying Securities. Historical prices of the Underlying Securities should not be considered as an indication of the future price performance of the Underlying Securities. Investors should understand that the risk involved in this type of investment is greater than that normally associated with other types of investments.

#### Volatility May Affect the Return on or Trading Value of the Securities

Volatility is the term used to describe the size and frequency of price and/or market fluctuations. If the volatility, or anticipated volatility, of the Underlying Securities changes over the term of the Securities, the trading value of the Securities may be adversely affected. In addition, if the Portfolio Value on an Observation Date is less than the Coupon Barrier Value, you will not receive an Interest Payment on the relevant Interest Payment Date, and if the Final Portfolio Value is less than the Protection Barrier Value, the Final Redemption Amount will be reduced such that you will receive less than the Principal Amount on the Maturity Date. In periods of high volatility, the likelihood of an investor not receiving some or all of the Interest Payments or a return of the full Principal Amount of the Securities increases.

#### The Securities may be Redeemed prior to the Maturity Date

The Securities will be automatically redeemed by the Bank on the Autocall Redemption Date if the Portfolio Value on an Observation Date, other than the first, second, third, fourth, fifth and last Observation Dates, is greater than or equal to the Autocall Redemption Value. In such event, investors will receive an Autocall Redemption Amount equal to the Principal Amount of the Securities. If the Securities are redeemed by the Bank, investors will not be entitled to receive any further interest that they may have been entitled to receive if the Securities had not been redeemed by the Bank.

#### *The Initial Estimated Value of the Securities Is Less than the Price to the Public and May not Reflect the Secondary Market Price, if any, of the Securities*

The initial estimated value set forth on the cover page of this pricing supplement does not represent a minimum price at which the Bank, RBC DS or any of our affiliates would be willing to purchase the Securities in any secondary market (if any exists) at any time. If you attempt to sell the Securities prior to maturity, their market value may be lower than the initial estimated value and the price you paid for them. This is due to, among other things, changes in the prices of the Underlying Securities and the inclusion in the price to the public of the selling commissions and the agency fee, as well as an amount retained by the Bank to compensate it for the creation, issuance and maintenance of the Securities (which may or may not also include any costs of its hedging obligations thereunder). These factors, together with various market and economic factors over the term of the Securities, could reduce the price at which you may be able to sell the Securities in any secondary market and will affect the value of the Securities in complex and unpredictable ways. Even if there is no change in market conditions or any other relevant factors, the price, if any, at which you may be able to sell your Securities prior to maturity may be less than your original purchase price. The Securities are not designed to be short-term trading instruments. Accordingly, you should be able and willing to hold your Securities to maturity.

#### The Initial Estimated Value of the Securities Is an Estimate Only, Calculated as of the Time the Terms of the Securities Were Set

The initial estimated value of the Securities is based on the value of the Bank's obligation to make the payments on the Securities. The return on the Securities can be replicated by purchasing and selling a combination of financial instruments, such as call options and put options. The fair value of the financial instrument components that would replicate the return on the Securities is equal to the fair value of the Securities. The Bank's estimate is based on a variety of assumptions, which may include expectations as to dividends, interest rates, the Bank's internal funding rates and volatility, and the term to maturity and any earlier call date of the Securities. The Bank's internal funding rates may differ from the market rates for the Bank's conventional debt securities. These assumptions are based on certain forecasts about future events, which may prove to be incorrect. Other entities may value the Securities or similar securities at a price that is significantly different than the Bank does. The value of the Securities at any time after the date of this pricing supplement 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 Securities in the secondary market, if any, should be expected to differ materially from the initial estimated value of the Securities.

Preparation of Initial EstimatedThe Securities are debt securities of the Bank, the return on which is linked to the priceValue:The Securities are debt securities of the Bank, the return on which is linked to the price<br/>performance of the Portfolio. In order to satisfy the Bank's payment obligations under<br/>the Securities, the Bank may choose to enter into certain hedging arrangements (which<br/>may include call options, put options or other derivatives) on the Issue Date which<br/>may or may not be with RBC DS or one of our other subsidiaries. The terms of these<br/>hedging arrangements, if any, take into account a number of factors, including the<br/>Bank's creditworthiness, interest rate movements, the volatility of the Underlying<br/>Securities, and the term to maturity and any earlier call date of the Securities.

The price of the Securities to the public also reflects the selling commissions and the agency fee, as well as an amount retained by the Bank to compensate it for the creation, issuance and maintenance of the Securities (which may or may not also include any costs of its hedging obligations thereunder). The initial estimated value for the Securities shown on the cover page will therefore be less than their public offering price. See "Risk Factors – The Initial Estimated Value of the Securities Is Less than the Price to the Public and May not Reflect the Secondary Market Price, if any, of the Securities" above.

The Bank has adopted written policies and procedures for determining the fair value of Securities issued by it pursuant to the Senior Note Program. These policies and procedures include: (a) methodologies used for valuing each type of financial instrument component that can be used in combination to replicate the return of the Securities; (b) the methods by which the Bank will review and test valuations to assess the quality of the prices obtained as well as the general functioning of the valuation process; and (c) how to deal with conflicts of interest.

**Suitability for Investment:** You should consult with your advisors regarding the suitability of an investment in the Securities. The Securities may be suitable for:

- investors seeking an investment product with exposure to the common shares of three Canadian energy companies
- investors who believe that the Portfolio Value will be equal to or above the Coupon Barrier Value on each Observation Date
- investors who believe that the Final Portfolio Value will not be below the Protection Barrier Value

	<ul> <li>investors who are willing and can affore amount of their investment</li> </ul>	d to risk substantially all of the principal				
		n a return linked to the price performance to assume the risks associated with an ace of the Portfolio				
	who are prepared to hold the Securitie assume the risk that the Securities will be the Portfolio Value is equal to or exceed	al to the term to maturity of the Securities s until maturity, but who are willing to be redeemed prior to the Maturity Date if ds the Autocall Redemption Value on an t, second, third, fourth, fifth and last				
	• investors who are prepared to take the ri be made on the Securities	sk that regular Interest Payments will not				
	• investors who understand that the potent maximum return on the Securities is equ	ial return on the Securities is limited; the all to \$101.50 per Security				
Book-entry Only Securities:	The Securities will be Fundserv Securities ( will be issued through the "book-entry-o Securities – Global Securities" and "– Legal If the Securities are issued in fully registered a described in the program supplement under Ownership – Book-Entry-Only Fundserv Amount (in the event of an Autocall Redem will be paid by the Bank to the registered hold	nly system". See "Description of the Ownership" in the program supplement. and certificated form in the circumstances "Description of the Securities – Legal Securities", the Autocall Redemption uption Event) and any Interest Payments				
Listing:	The Securities will not be listed on any sto product supplement.	ck exchange. See "Risk Factors" in the				
Secondary Market:	and related settlement using the Fundserv net Fundserv network at a sale price equal to the of business on the Exchange Day on which the posted to Fundserv by the Calculation Agent Principal Amount of such Securities, less an Generally, to be effective on a Business Day redemption request will need to be initiate Business Day (or such other time as may be	Securities may be purchased through dealers and other firms that facilitate purchase and related settlement using the Fundserv network. Securities may be resold using the Fundserv network at a sale price equal to the price posted on Fundserv as of the close of business on the Exchange Day on which the order is placed, as determined by and posted to Fundserv by the Calculation Agent, which sale price may be lower than the Principal Amount of such Securities, less an early trading charge as specified below. Generally, to be effective on a Business Day (defined in the program supplement), a redemption request will need to be initiated by 2:00 p.m. (Toronto time) on that Business Day (or such other time as may be established by Fundserv). Any request received after such time will be deemed to be a request sent and received on the next				
	See "Risk Factors – The Initial Estimated Val to the Public and May not Reflect the S Securities" above and "Secondary Market for supplement.	econdary Market Price, if any, of the				
	Information regarding the Portfolio Value Coupon Barrier Value, the Protection Barrier Securities may be accessed at www.rbcnc secondary market for the Securities will de Market for Securities" in the program supple	Value and the daily closing price for the otes.com. There is no assurance that a evelop or be sustained. See "Secondary				
	If a Security is sold within the first 360 days the sale of the Securities will be reduced by <b>Charge</b> ") equal to a percentage of the Princi	s from the Issue Date, the proceeds from an early trading charge ("Early Trading				
	If Sold Within the Following No. of Days from Issue Date	Early Trading Charge (% of Principal Amount)				
	1 - 60 days	3.50%				
	61 - 120 days	3.25%				
	121 - 180 days	3.00%				

	181 - 240 days	2.50%				
	241 - 300 days	1.75%				
	301 - 360 days	1.00%				
	Thereafter	Nil				
Fiscal Agent:	RBC DS. See "Description of the Securities – I Fundserv Depository Agreement" in the progra					
Calculation Agent:	RBC DS. See "Description of the Securities – Calculation Agent" in the program supplement and "Risk Factors" in the product supplement.					
Tax:	An initial purchaser of Securities who acquires Date and who, at all relevant times, for purpose an individual (other than a trust), is a resident and is not affiliated with the Bank, and acquir property will be required to include in comp receivable on the Securities, as well as certain a thereof. If, on maturity or other disposition repayment in full by the Bank), such a holder in adjusted cost base of the Securities, such holder shortfall. See "Certain Canadian Tax Consi <b>purchasers of Securities should consult with</b> <b>to their particular circumstances.</b>	ses of the <i>Income Tax Act</i> (Canada), is t of Canada, deals at arm's length with ires and holds the Securities as capital puting income all interest received or accrued interest thereon on a disposition n (including on early redemption or receives an amount that is less than the er will realize a capital loss equal to the iderations" in Appendix C. <b>Potential</b>				

## **APPENDIX A**

## Certain Information Concerning the Common Shares of each of the Underlying Security Issuers on the Toronto Stock Exchange

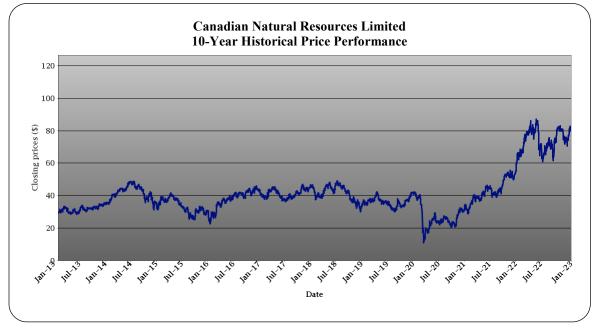
Entity Name	Symbol	Exchange	Portfolio Weight	Closing Prices (as of February 7, 2023)
Canadian Natural Resources Limited	CNQ	TSX	33.333%	79.33
Cenovus Energy Inc.	CVE	TSX	33.333%	26.09
Suncor Energy Inc.	SU	TSX	33.333%	44.91

### **Canadian Natural Resources Limited**

Canadian Natural Resources Limited acquires, explores for, develops, and produces natural gas, crude oil, and related products. Canadian Natural Resources Limited operates in the Canadian provinces of Alberta, northeastern British Columbia and Saskatchewan. Canadian Natural Resources Limited also operates in areas which have access for exploration activities and where pipeline systems already exist. The company's common shares are listed on the TSX under the symbol "CNQ". The annual dividend yield of the common shares of Canadian Natural Resources Limited as of February 7, 2023 was 5.80%.

### **Historical Price Performance**

The following chart sets forth the historical price performance of the common shares of Canadian Natural Resources Limited for the period from January 31, 2013 to January 31, 2023. Historical price performance does not take into account distributions or dividends paid on the Underlying Securities.



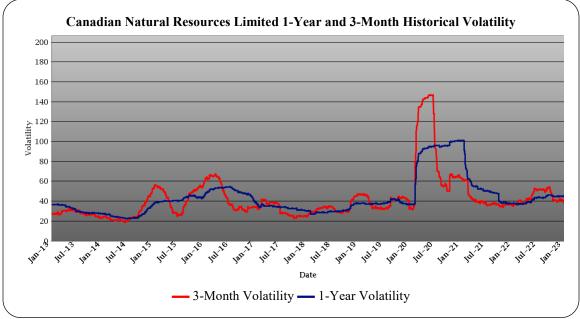
Historical price performance of the common shares of Canadian Natural Resources Limited will not necessarily predict future price performance of the common shares of Canadian Natural Resources Limited or the Securities. The source of the data displayed in this chart is Bloomberg L.P. and its accuracy cannot be guaranteed.

Historical annual percentage change of the common shares of Canadian Natural Resources Limited										
Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Percentage change (%)	25.49	-0.06	-15.87	43.46	4.98	-26.67	27.50	-27.17	74.73	40.67

Source: Bloomberg L.P.: Measures annualized period as of December 31 of the previous year.

The following chart sets forth the one-year and three-month historical volatility of the common shares of Canadian Natural Resources Limited for the period from January 31, 2013 to January 31, 2023.

#### Historical volatility is not a guarantee of future volatility.



The source of the data displayed in this chart is Bloomberg L.P. and its accuracy cannot be guaranteed.

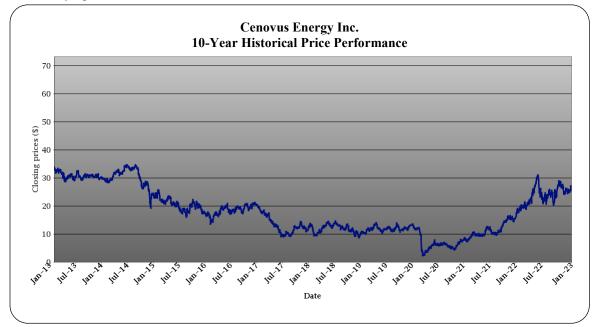
Volatility is the term used to describe the magnitude and frequency of the changes in a security's value over a given time period. A higher volatility means that a security's value can potentially be spread out over a larger range of values. This means that the price of the security can change dramatically over a short time period in either direction. A lower volatility means that a security's value does not fluctuate dramatically, but changes in value at a steady pace over a period of time.

### **Cenovus Energy Inc.**

Cenovus Energy Inc. is an integrated oil company. Cenovus Energy Inc. comprises natural gas, crude oil, and natural gas liquids reserves. Cenovus Energy Inc. has established natural gas and crude oil production in Alberta and Saskatchewan as well as refineries in Illinois and Texas. The company's common shares are listed on the TSX under the symbol "CVE". The annual dividend yield of the common shares of Cenovus Energy Inc. as of February 7, 2023 was 1.78%.

### **Historical Price Performance**

The following chart sets forth the historical price performance of the common shares of Cenovus Energy Inc. for the period from January 31, 2013 to January 31, 2023. Historical price performance does not take into account distributions or dividends paid on the Underlying Securities.

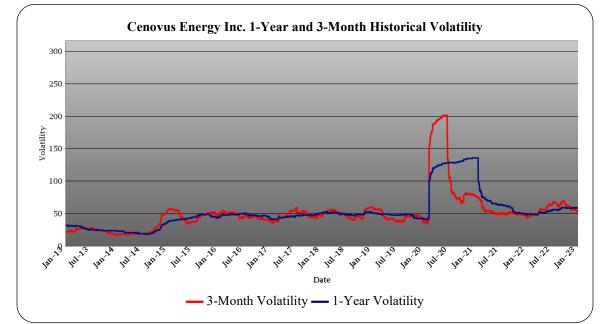


Historical price performance of the common shares of Cenovus Energy Inc. will not necessarily predict future price performance of the common shares of Cenovus Energy Inc. or the Securities. The source of the data displayed in this chart is Bloomberg L.P. and its accuracy cannot be guaranteed.

	Historical a	annual per	centage cl	nange of t	he commo	n shares o	f Cenovus	Energy In	nc.	
Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Percentage change (%)	-8.68	-21.15	-26.99	16.00	-43.45	-16.38	37.50	-41.29	100.13	69.37

Source: Bloomberg L.P.: Measures annualized period as of December 31 of the previous year.

The following chart sets forth the one-year and three-month historical volatility of the common shares of Cenovus Energy Inc. for the period from January 31, 2013 to January 31, 2023.



Historical volatility is not a guarantee of future volatility.

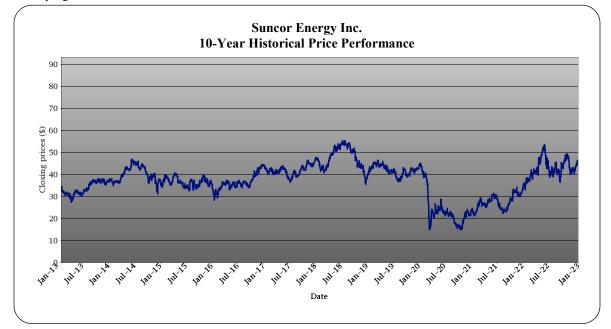
The source of the data displayed in this chart is Bloomberg L.P. and its accuracy cannot be guaranteed.

### Suncor Energy Inc.

Suncor Energy Inc. is an integrated energy company focused on developing the Athabasca oil sands basin. Suncor Energy Inc. extracts and upgrades oil sands into refinery feedstock and diesel fuel, explores for, develops and produces natural gas, refines crude oil and markets a range of petroleum and petrochemical products, and operates crude oil pipelines and retail petroleum stations. The company's common shares are listed on the TSX under the symbol "SU". The annual dividend yield of the common shares of Suncor Energy Inc. as of February 7, 2023 was 4.19%.

## **Historical Price Performance**

The following chart sets forth the historical price performance of the common shares of Suncor Energy Inc. for the period from January 31, 2013 to January 31, 2023. Historical price performance does not take into account distributions or dividends paid on the Underlying Securities.

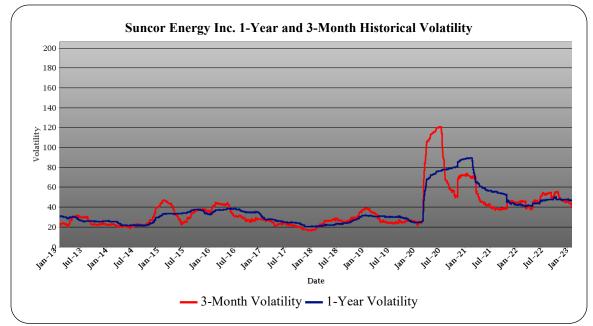


Historical price performance of the common shares of Suncor Energy Inc. will not necessarily predict future price performance of the common shares of Suncor Energy Inc. or the Securities. The source of the data displayed in this chart is Bloomberg L.P. and its accuracy cannot be guaranteed.

Historical annual percentage change of the common shares of Suncor Energy Inc.										
Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Percentage change (%)	13.85	-0.91	-3.20	22.90	5.13	-17.38	11.62	-49.84	48.24	35.70

Source: Bloomberg L.P.: Measures annualized period as of December 31 of the previous year.

The following chart sets forth the one-year and three-month historical volatility of the common shares of Suncor Energy Inc. for the period from January 31, 2013 to January 31, 2023.



## Historical volatility is not a guarantee of future volatility.

The source of the data displayed in this chart is Bloomberg L.P. and its accuracy cannot be guaranteed.

### **APPENDIX B**

### Sample Calculations of Final Redemption Amount or Autocall Redemption Amount and Interest Payments

The examples set out below are included for illustration purposes only. The Portfolio Values used to illustrate the calculation of the Final Redemption Amount or Autocall Redemption Amount and the Interest Payments over the term of the Securities are not estimates or forecasts of the Portfolio Values on which the Percentage Change, and in turn the Final Redemption Amount, Autocall Redemption Amount and Interest Payments, if any, will depend.

## Hypothetical Calculation of the Initial Portfolio Value

It is assumed that the aggregate Principal Amount of Securities issued under this offering is \$15,000,000.00 and the (hypothetical) closing prices of the Underlying Securities comprising the Portfolio on the Initial Valuation Date are as illustrated in the table below.

Entity Name	Symbol	Closing Price (\$)	Underlying Security Value in Portfolio (\$)	Portfolio Weight	Number of Underlying Securities
Canadian Natural Resources Limited	CNQ	79.33	5,000,000.00	33.333%	63,027.85831
Cenovus Energy Inc.	CVE	26.09	5,000,000.00	33.333%	191,644.30816
Suncor Energy Inc.	SU	44.91	5,000,000.00	33.333%	111,333.77867

Based on those assumptions, the Initial Portfolio Value would be the sum of the Underlying Security values, which is \$15,000,000.00.

## Hypothetical Calculation of the Final Portfolio Value

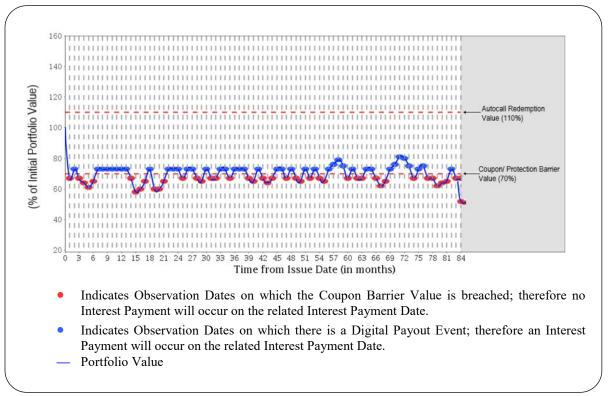
For illustration purposes, it is assumed that no Extraordinary Event has occurred and that the (hypothetical) closing prices of the Underlying Securities comprising the Portfolio on the Final Valuation Date are as illustrated in the table below. For the purposes of the following table, certain dollar values have been rounded to two decimal places.

Entity Name	Symbol	Closing Price (\$)	Number of Underlying Securities	Underlying Security Value in Portfolio (\$)
Canadian Natural Resources Limited	CNQ	97.18	63,027.85831	6,125,047.27
Cenovus Energy Inc.	CVE	31.96	191,644.30816	6,124,952.09
Suncor Energy Inc.	SU	55.01	111,333.77867	6,124,471.16

Based on those assumptions, the Final Portfolio Value would be the sum of the Underlying Security values, which is \$18,374,470.52.

All examples below assume that a holder of the Securities has purchased Securities with an aggregate principal amount of \$100.00, that no Extraordinary Event has occurred, an Autocall Redemption Value of 110.00% of the Initial Portfolio Value, a Coupon Barrier Value of 70.00% of the Initial Portfolio Value and a Protection Barrier Value of 70.00% of the Initial Portfolio Value. For convenience, each vertical line in the charts below represents both a hypothetical Observation Date and the next succeeding Interest Payment Date. All dollar amounts are rounded to the nearest whole cent.

Example #1 — Loss Scenario with Payment on the Maturity Date at Less Than the Principal Amount



In this scenario, there is no Observation Date on which the Portfolio Value is at or above the Autocall Redemption Value and, accordingly, the Securities would not be redeemed before the Maturity Date. On the Final Valuation Date, the Final Portfolio Value is below the Protection Barrier Value.

### (i) Interest Payments

In this example, there is a Digital Payout Event on 41 of the 84 Observation Dates. On the other 43 Observation Dates, no Digital Payout Event would occur because the Portfolio Value is below the Coupon Barrier Value. Therefore, the Interest Payment of \$1.2083 per Interest Period would be payable for 41 Interest Periods on the applicable Interest Payment Date, for total Interest Payments of:

Principal Amount of Securities × 1.2083% per Interest Period × 41 Interest Periods

$$100 \times 1.2083\% \times 41 = 49.54$$

(ii) Final Redemption Amount

In this example, the Initial Portfolio Value  $(X_i)$  is \$15,000,000.00 and the Final Portfolio Value  $(X_f)$  is \$7,500,000.00. Therefore, the Final Redemption Amount would be calculated as follows:

Initial Portfolio Value = \$15,000,000.00

Final Portfolio Value = \$7,500,000.00

Percentage Change = (\$7,500,000.00 - \$15,000,000.00) / \$15,000,000.00 = -0.5000 or -50.00%

Since the Final Portfolio Value is below the Protection Barrier Value, the Final Redemption Amount is calculated as follows:

Final Redemption Amount =  $100.00 + (100.00 \times -50.00\%) = 50.00$ 

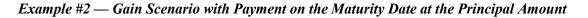
Therefore, the total amounts payable per Security from the Issue Date to the Maturity Date are:

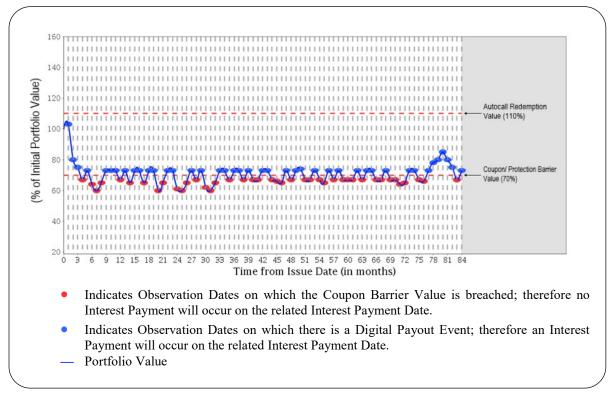
(a) Total Interest Payments: \$49.54

(b) Final Redemption Amount: \$50.00

(c) Total amount paid over the term of the Securities: \$99.54

The equivalent annually compounded rate of return in this example is -0.07%.





In this scenario, there is no Observation Date on which the Portfolio Value is at or above the Autocall Redemption Value and, accordingly, the Securities would not be redeemed before the Maturity Date. On the Final Valuation Date, the Final Portfolio Value is at or above the Protection Barrier Value.

### (i) Interest Payments

In this example, there is a Digital Payout Event on 42 of the 84 Observation Dates. On the other 42 Observation Dates, no Digital Payout Event would occur because the Portfolio Value is below the Coupon Barrier Value. Therefore, the Interest Payment of \$1.2083 per Interest Period would be payable for 42 Interest Periods on the applicable Interest Payment Date for total Interest Payments of:

Principal Amount of Securities × 1.2083% per Interest Period × 42 Interest Periods

 $100 \times 1.2083\% \times 42 = 50.75$ 

### (ii) Final Redemption Amount

In this example, since the Final Portfolio Value is \$11,250,000.00 which is above its Protection Barrier Value of 70.00% of the Initial Portfolio Value of \$15,000,000.00, the Final Redemption Amount per Security is equal to \$100.00.

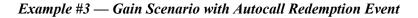
Therefore, the total amounts payable per Security from the Issue Date to the Maturity Date are:

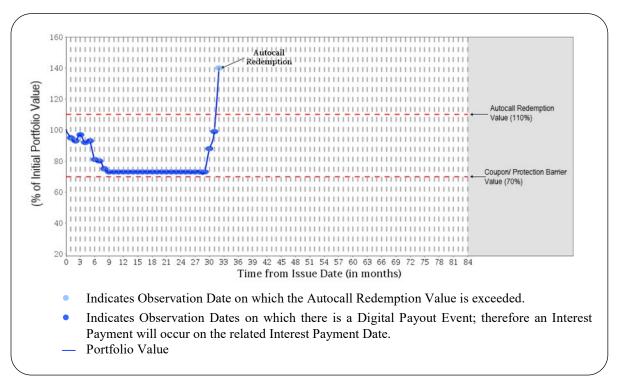
(a) Total Interest Payments: \$50.75

(b) Final Redemption Amount: \$100.00

(c) Total amount paid over the term of the Securities: \$150.75

The equivalent annually compounded rate of return in this example is 6.04%.





In this scenario, the Portfolio Value is at or above the Autocall Redemption Value on the Observation Date that falls 32 months into the term of the Securities. This would constitute an Autocall Redemption Event and, on the next succeeding Interest Payment Date, the Bank would redeem the Securities.

(i) Interest Payments

In this example, there is a Digital Payout Event on each of the 32 Observation Dates prior to the redemption of the Securities because the Portfolio Value is at or above the Coupon Barrier Value on each such date. Therefore, the Interest Payment of \$1.2083 per Interest Period would be payable for each Interest Period on the applicable Interest Payment Date (including on the Autocall Redemption Date), for total Interest Payments of:

Principal Amount of Securities × 1.2083% per Interest Period × 32 Interest Periods

 $100 \times 1.2083\% \times 32 = 38.67$ 

(ii) Autocall Redemption Amount

The Autocall Redemption Amount per Security is equal to \$100.00.

Therefore, the total amounts payable per Security from the Issue Date to the Autocall Redemption Date are:

(a) Total Interest Payments: \$38.67

(b) Autocall Redemption Amount: \$100.00

(c) Total amount paid over the term of the Securities: \$138.67

The equivalent annually compounded rate of return in this example is 13.04%.

# **APPENDIX C**

### **Certain Canadian Tax Considerations**

In the opinion of the Bank's counsel, Davies Ward Phillips & Vineberg LLP, the following summary fairly describes the principal Canadian federal income tax considerations under the *Income Tax Act* (Canada) (the "**Tax Act**") generally applicable to an initial purchaser of Securities under this pricing supplement who, at all relevant times, for purposes of the Tax Act, deals at arm's length with and is not affiliated with the Bank (a "**Holder**").

This summary is based upon the current provisions of the Tax Act and the regulations thereunder (the "**Regulations**"), all specific proposals to amend the Tax Act or such Regulations publicly announced by the federal Minister of Finance prior to the date hereof (the "**Proposals**") and counsel's understanding of the current administrative and assessing policies and practices of the Canada Revenue Agency ("**CRA**"). Except for the Proposals, this summary does not take into account or anticipate any changes (including retroactive changes) in the law or the administrative and assessing policies or practices of the CRA, whether by judicial, regulatory, governmental or legislative action, nor does it take into account tax laws of any province or territory of Canada, or of any jurisdiction outside Canada. Provisions of provincial income tax legislation vary from province to province in Canada and may differ from federal income tax legislation. No assurance can be given that the Proposals will be implemented in their current form, or at all. This summary assumes that the Holder will neither undertake nor arrange a transaction in respect of the Securities primarily for the purpose of obtaining a tax benefit, has not entered into a "derivative forward agreement" (as defined in the Tax Act) in respect of the Securities and that the Securities are not issued at a discount.

This summary is of a general nature only and is not intended to constitute, nor should it be relied upon or construed as, tax advice to any particular Holder, nor is it exhaustive of all possible Canadian federal income tax considerations. Holders should consult their own tax advisors as to the potential consequences to them of the acquisition, ownership and disposition of Securities having regard to their particular circumstances.

## Holders Resident in Canada

The following discussion applies to a Holder who, at all relevant times, for the purposes of the Tax Act and any applicable income tax treaty or convention, is an individual (other than a trust) who is resident (or deemed to be resident) in Canada and who acquires and holds the Securities as capital property (a "**Resident Holder**"). Certain Resident Holders who might not otherwise be considered to hold their Securities as capital property may, in certain circumstances, be entitled to have their Securities, and all other "Canadian securities" (as defined in the Tax Act) owned by such Resident Holders in the taxation year and all subsequent taxation years, treated as capital property by making the irrevocable election permitted by subsection 39(4) of the Tax Act.

### Interest

The amount of any interest received or receivable (depending on the method regularly followed in computing income under the Tax Act) by a Resident Holder in a taxation year (including on redemption or repayment in full by the Bank) will be required to be included in computing the Resident Holder's income for the taxation year, except to the extent that such amount has already been included in the Resident Holder's income for that or a preceding taxation year.

### Disposition of Securities

On a disposition or deemed disposition of a Security by a Resident Holder to a person (other than the Bank), the amount of any interest accrued on the Security to the time of disposition will be required to be included in computing the Resident Holder's income for the taxation year in which the disposition takes place (except to the extent that such accrued interest has already been included in the Resident Holder's income for that or a preceding taxation year), and will be excluded from the proceeds of disposition of the Security. Because the interest entitlement of a Resident Holder for a particular Interest Period will generally only be determinable on the Observation Date for that period, whether any accrued interest will be payable on a Security at the time of disposition may, in some circumstances, be considered uncertain.

In addition, the Resident Holder should realize a capital gain (or capital loss) to the extent that the proceeds of disposition, net of amounts included in income as interest and any reasonable costs of disposition, exceed (or are exceeded by) the adjusted cost base of the Security to the Resident Holder. One-half of any capital gain realized by a Resident Holder must be included in the income of the Resident Holder. One-half of any capital loss realized by a Resident Holder is deductible against the taxable portion of capital gains realized in the year, in the three preceding years or in subsequent years, subject to the rules and restrictions contained in the Tax Act. Capital gains realized by an individual may give rise to a liability for alternative minimum tax.

## Redemption or Repayment by the Bank

A Resident Holder who holds the Securities until maturity (or earlier redemption or repayment in full by the Bank) and who receives redemption or repayment proceeds that are less than the Principal Amount of the Securities will realize a capital loss to the extent that the amount received at such time (otherwise than on account of interest) is less than the Resident Holder's adjusted cost base of such Securities. The income tax considerations associated with the realization of a capital loss are described above.

### Holders Not Resident in Canada

The following discussion applies to a Holder who, at all relevant times, for the purposes of the Tax Act is neither resident nor deemed to be resident in Canada, deals at arm's length with any Canadian resident (or deemed Canadian resident) to whom the Holder disposes of the Securities, is neither a "specified shareholder" of the Bank nor a person who does not deal at arm's length with a specified shareholder of the Bank for purposes of the "thin capitalization" rule contained in subsection 18(4) of the Tax Act, does not use or hold and is not deemed to use or hold the Securities in the course of carrying on a business in Canada and elsewhere (a "Non-Resident Holder").

Interest paid or credited or deemed to be paid or credited on the Securities (including any interest deemed to be paid in certain cases involving the assignment or other transfer of a Security to a resident or deemed resident of Canada) to a Non-Resident Holder will not be subject to Canadian non-resident withholding tax unless any portion of such interest is contingent or dependent on the use of or production from property in Canada or is computed by reference to revenue, profit, cash flow, commodity price or any other similar criterion or by reference to dividends paid or payable to shareholders of any class of shares of the capital stock of a corporation ("**Participating Debt Interest**"). Having regard to the terms of the Securities, interest paid or credited or deemed to be paid or credited on the Securities should not be considered to be Participating Debt Interest.

There should be no other taxes on income (including taxable capital gains) payable by a Non-Resident Holder in respect of a Security.

## **Eligibility for Investment**

The Securities, if issued on the date of this pricing supplement, would be qualified investments (for purposes of the Tax Act) for trusts governed by registered retirement savings plans ("**RRSPs**"), registered retirement income funds ("**RRIFs**"), tax-free savings accounts ("**TFSAs**"), registered disability savings plans ("**RDSPs**"), registered education savings plans ("**RESPs**") and deferred profit sharing plans ("**DPSPs**"), each within the meaning of the Tax Act (other than a DPSP to which payments are made by the Bank or a corporation or partnership with which the Bank does not deal at arm's length within the meaning of the Tax Act).

Notwithstanding the foregoing, if Securities are "prohibited investments" (as that term is defined in the Tax Act) for an RRSP, RRIF, TFSA, RDSP or RESP, the annuitant of the RRSP or RRIF, the holder of the TFSA or RDSP, or the subscriber of the RESP, as the case may be (each a "**Plan Holder**"), will be subject to a penalty tax as set out in the Tax Act. Securities will be prohibited investments for an RRSP, RRIF, TFSA, RDSP or RESP of a Plan Holder who has a "significant interest" (as defined in the Tax Act for purposes of the prohibited investment rules) in the Bank or who does not deal at arm's length, within the meaning of the Tax Act, with the Bank.