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Registration Statement No. 333-275151
Issuer Free Writing Prospectus dated August 19, 2025
CUSIP #: 63743H FZ0
ISIN#: US63743HFZ01

NATIONAL RURAL UTILITIES COOPERATIVE FINANCE CORPORATION

Medium-Term Notes, Series D
With Maturities of Nine Months or More from Date of Issue

Fixed Rate Notes

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| Issuer: | National Rural Utilities Cooperative Finance Corporation |
| Expected Ratings*: | A2 / A (Moody's / Fitch) |
| Principal Amount: | \$700,000,000 |
| Security Type: | Senior Unsecured |
| Interest Rate: | 4.15% |
| Issue Price: | 99.888% of Principal Amount |
| Trade Date: | August 19, 2025 |
| Original Issue Date: | August 25, 2025 (T+4) |
| Maturity Date: | August 25, 2028 |
| Benchmark Treasury: | 3.625% due August 15, 2028 |
| Benchmark Treasury Yield: | 3.710% |
| Spread to Benchmark Treasury: | +48 basis points |
| Yield to Maturity: | 4.190% |
| Interest Payment Dates: | Each February 25 and August 25, and the maturity date, commencing February 25, 2026 |
| Optional Redemption: | <p>The Company may redeem the notes at any time prior to July 25, 2028 (the "Par Call Date"), at its option, in whole or in part, at a "make-whole" redemption price (expressed as a percentage of principal amount and rounded to three decimal places) equal to the greater of: (1)(a) the sum of the present values of the remaining scheduled payments of principal and interest thereon discounted to the redemption date (assuming the notes matured on the Par Call Date) on a semi-annual basis (assuming a 360-day year consisting of twelve 30-day months) at the Treasury Rate plus 10 basis points less (b) interest accrued to the date of redemption, and (2) 100% of the principal amount of the notes to be redeemed, plus, in either case, accrued and unpaid interest thereon to, but excluding, the redemption date.</p> <p>At any time on or after the Par Call Date, the Company may redeem the notes, at its option, in whole or in part, at a redemption price equal to 100% of the principal</p> |

amount of the notes then outstanding to be redeemed, plus accrued and unpaid interest thereon to, but excluding, the date of redemption.

“*Treasury Rate*” means, with respect to any redemption date, the yield determined by the Company in accordance with the following two paragraphs.

The Treasury Rate shall be determined by the Company after 4:15 p.m., New York City time (or after such time as yields on U.S. government securities are posted daily by the Board of Governors of the Federal Reserve System), on the third business day preceding the redemption date based upon the yield or yields for the most recent day that appear after such time on such day in the most recent statistical release published by the Board of Governors of the Federal Reserve System designated as “Selected Interest Rates (Daily) - H.15” (or any successor designation or publication) (“H.15”) under the caption “U.S. government securities–Treasury constant maturities–Nominal” (or any successor caption or heading) (“H.15 TCM”). In determining the Treasury Rate, the Company shall select, as applicable: (1) the yield for the Treasury constant maturity on H.15 exactly equal to the period from the redemption date to the Par Call Date (the “Remaining Life”); or (2) if there is no such Treasury constant maturity on H.15 exactly equal to the Remaining Life, the two yields – one yield corresponding to the Treasury constant maturity on H.15 immediately shorter than and one yield corresponding to the Treasury constant maturity on H.15 immediately longer than the Remaining Life – and shall interpolate to the Par Call Date on a straight-line basis (using the actual number of days) using such yields and rounding the result to three decimal places; or (3) if there is no such Treasury constant maturity on H.15 shorter than or longer than the Remaining Life, the yield for the single Treasury constant maturity on H.15 closest to the Remaining Life. For purposes of this paragraph, the applicable Treasury constant maturity or maturities on H.15 shall be deemed to have a maturity date equal to the relevant number of months or years, as applicable, of such Treasury constant maturity from the redemption date.

If on the third business day preceding the redemption date H.15 TCM is no longer published, the Company shall calculate the Treasury Rate based on the rate per annum equal to the semi-annual equivalent yield to maturity at 11:00 a.m., New York City time, on the second business day preceding such redemption date of the United States Treasury security maturing on, or with a maturity that is closest to, the Par Call Date, as applicable. If there is no United States Treasury security maturing on the Par Call Date but there are two or more United States Treasury securities with a maturity date equally distant from the Par Call Date, one with a maturity date preceding the Par Call Date and one with a maturity date following the Par Call Date, the Company shall select the United States Treasury security with a maturity date preceding the Par Call Date. If there are two or more United States Treasury securities maturing on the Par Call Date or two or more United States Treasury securities meeting the criteria of the preceding sentence, the Company shall select from among these two or more United States Treasury securities the United States Treasury security that is trading closest to par based upon the average of the bid and asked prices for such United States Treasury securities at 11:00 a.m., New York City time. In determining the Treasury Rate in accordance with the terms of this paragraph, the semi-annual yield to maturity of the applicable United States Treasury security shall be based upon the average of the bid and asked prices (expressed as a percentage of principal amount) at 11:00 a.m., New York City time, of such United States Treasury security, and rounded to three decimal places.

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| Payment at Maturity: | The payment at maturity will be 100% of the Principal Amount plus accrued and unpaid interest, if any |
| Basis: | As Principal |
| Agents: | MUFG Securities Americas Inc. RBC Capital Markets, LLC Truist Securities, Inc. |
| Form of Note: (Book-Entry or Certificated) | Book-Entry |
| Denominations: | \$2,000 x \$1,000 |
| Other Terms: | None |

* Note: A securities rating is not a recommendation to buy, sell, or hold securities and may be subject to revision or withdrawal at any time.

It is expected that delivery of the notes will be made against payment therefor on or about August 25, 2025 which is the fourth trading day following the date hereof (such settlement cycle being referred to as T+4). Purchasers of notes should note that the ability to settle secondary market trades of the notes effected prior to the first business day before the settlement date may be affected by the T+4 settlement. Accordingly, purchasers who wish to trade the notes prior to the first business day before the settlement date will be required to specify an alternative settlement cycle at the time of any such trade to prevent a failed settlement and should consult their own legal advisors.

The issuer has filed a registration statement (including a prospectus) with the U.S. Securities and Exchange Commission (“SEC”) for this offering. Before you invest, you should read the prospectus for this offering in that registration statement, and other documents the issuer has filed with the SEC for more complete information about the issuer and this offering. You may get these documents for free by searching the SEC online database (EDGAR®) at www.sec.gov. Alternatively, you may obtain a copy of the prospectus from MUFG Securities Americas Inc. by calling toll-free at 1-877-649-6848, RBC Capital Markets, LLC by calling toll-free at 1-866-375-6829 and Truist Securities, Inc. by calling toll-free at 1-800-685-4786.