

WISCONSIN ENERGY CORP
 Form 424B2
 June 05, 2015
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Filed Pursuant to Rule 424(b)(2)
 Registration No. 333-204556

CALCULATION OF REGISTRATION FEE

| Title of Each Class of Securities to be Registered | | Amount Registered | Maximum Aggregate Offering Price | Amount of Registration Fee(1)(2) | |
|--|--|-------------------|----------------------------------|----------------------------------|--|
| | | | | | |
| (1) | Calculated in accordance with Rule 457(r) under the Securities Act of 1933, as amended. | | | | |
| | | | | | |
| (2) | This Calculation of Registration Fee table shall be deemed to update the Calculation of Registration Fee table in Wisconsin Energy Corporation's Registration Statement on Form S-3 (Registration No. 333-204556). | | | | |

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PROSPECTUS SUPPLEMENT

(To Prospectus dated May 29, 2015)

\$1,200,000,000

\$300,000,000 1.65% Senior Notes due June 15, 2018
\$400,000,000 2.45% Senior Notes due June 15, 2020
\$500,000,000 3.55% Senior Notes due June 15, 2025

We are offering \$300,000,000 aggregate principal amount of our 1.65% senior notes due 2018 (the 2018 Notes), \$400,000,000 aggregate principal amount of our 2.45% senior notes due 2020 (the 2020 Notes) and \$500,000,000 aggregate principal amount of our 3.55% senior notes due 2025 (the 2025 Notes and, together with the 2018 Notes and the 2020 Notes, the Notes). We will pay interest on the Notes semi-annually in arrears on June 15 and December 15 of each year, beginning on December 15, 2015. The Notes will be issued only in denominations of \$1,000 and integral multiples of \$1,000.

We may, at our option, redeem some or all of the Notes at any time prior to maturity at the applicable redemption prices discussed under the caption Certain Terms of the Notes Redemption at Our Option. We must redeem all of the Notes under the circumstances and at the redemption prices described in this prospectus supplement under the caption Certain Terms of the Notes Special Mandatory Redemption.

The Notes will be unsecured and will rank equally with all of our other unsecured and unsubordinated debt and other obligations from time to time outstanding.

Investing in the Notes involves certain risks. See Risk Factors on page S-5 of this prospectus supplement.

We do not intend to apply for listing of the Notes on any securities exchange or automated quotation system.

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

| | Public Offering Price(1) | Underwriting Discount | Proceeds to Wisconsin Energy (before expenses) |
|---------------|-------------------------------------|----------------------------------|---|
| Per 2018 Note | 99.944% | 0.350% | 99.594% |
| Total | \$ 299,832,000 | \$ 1,050,000 | \$ 298,782,000 |
| Per 2020 Note | 99.817% | 0.600% | 99.217% |
| Total | \$ 399,268,000 | \$ 2,400,000 | \$ 396,868,000 |
| Per 2025 Note | 99.983% | 0.650% | 99.333% |
| Total | \$ 499,915,000 | \$ 3,250,000 | \$ 496,665,000 |

(1) Plus accrued interest from June 10, 2015, if settlement occurs after that date.

The underwriters expect to deliver the Notes in book-entry form only through The Depository Trust Company on or about June 10, 2015.

Joint Book-Running Managers

BofA Merrill Lynch

J.P. Morgan

BNP PARIBAS

KeyBanc Capital Markets

Wells Fargo Securities

Co-Managers

Loop Capital Markets

PNC Capital Markets LLC

Ramirez & Co., Inc.

June 4, 2015

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You should rely only on the information contained in or incorporated by reference in this prospectus supplement, the accompanying prospectus and any written communication from us or the underwriters specifying the final terms of the offering. We have not authorized anyone to provide you with different information. We are not making an offer of these securities in any jurisdiction where the offer is not permitted. You should assume that the information contained in this prospectus supplement, the accompanying prospectus or the documents incorporated by reference is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed since those dates.

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SUMMARY

In this prospectus supplement, unless the context requires otherwise, Wisconsin Energy, we, us and our refer to Wisconsin Energy Corporation, a Wisconsin corporation, and not to the underwriters.

The information below is only a summary of more detailed information included elsewhere or incorporated by reference in this prospectus supplement and the accompanying prospectus. This summary may not contain all of the information that is important to you or that you should consider before buying securities in this offering. Please read this entire prospectus supplement and the accompanying prospectus, as well as the information incorporated herein and therein by reference, carefully.

Wisconsin Energy Corporation

Wisconsin Energy Corporation was incorporated in the State of Wisconsin in 1981 and became a diversified holding company in 1986. We maintain our principal executive offices in Milwaukee, Wisconsin.

We conduct our operations primarily in two reportable segments: a utility energy segment and a non-utility energy segment. Our primary subsidiaries are Wisconsin Electric Power Company (Wisconsin Electric), Wisconsin Gas LLC (Wisconsin Gas) and W.E. Power, LLC (We Power).

Utility Energy Segment: Our utility energy segment consists of Wisconsin Electric and Wisconsin Gas. As of March 31, 2015, we served approximately 1,136,300 electric customers in Wisconsin and the Upper Peninsula of Michigan, 1,092,100 gas customers in Wisconsin and 435 steam customers in metropolitan Milwaukee, Wisconsin. Wisconsin Electric and Wisconsin Gas operate under the trade name of We Energies.

Non-Utility Energy Segment: Our non-utility energy segment consists primarily of We Power, which owns and leases to Wisconsin Electric the generating capacity included in our *Power the Future* strategy.

Recent Developments

On June 22, 2014, Wisconsin Energy and Integrys Energy Group, Inc. (Integrys) entered into an agreement and plan of merger (the Merger Agreement) pursuant to which we will acquire Integrys (the Acquisition). Integrys shareholders will receive 1.128 shares of Wisconsin Energy common stock and \$18.58 in cash per share of Integrys common stock. We expect the cash portion of the consideration for the

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proposed Acquisition to be approximately \$1.5 billion, a portion of which we plan to fund with the net proceeds from this offering. We will also assume all of Integrys' outstanding debt. The combined company will serve approximately 1.6 million electric customers and 2.8 million gas customers, will own approximately 60% of American Transmission Company LLC and will be named WEC Energy Group, Inc.

The proposed Acquisition is subject to several conditions, including, among others, the receipt of approvals from various government agencies. On May 14, 2015, the Illinois Commerce Commission's (ICC) administrative law judge presiding over the proposed Acquisition proceeding before the ICC issued a proposed order that includes conditions that the ICC should consider in its deliberations. In addition, we received the final written order from the Public Service Commission of Wisconsin, effective as of May 22, 2015, approving the proposed Acquisition. For additional information on this proposed Acquisition and the status of the necessary regulatory approvals, see Note 3 Proposed Acquisition in the Notes to Consolidated Condensed Financial Statements and the discussion under Corporate Developments in Item 2 of our Quarterly Report on Form 10-Q for the quarter ended March 31, 2015. If we receive all of the necessary regulatory approvals, we expect to close the proposed Acquisition by the end of this summer.

For a further description of our business and our corporate strategy, see our Annual Report on Form 10-K for the year ended December 31, 2014, as well as the other documents incorporated by reference.

Our principal executive offices are located at 231 West Michigan Street, P.O. Box 1331, Milwaukee, Wisconsin 53201. Our telephone number is (414) 221-2345.

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The Offering

| | |
|-------------------------------------|---|
| Issuer | Wisconsin Energy Corporation. |
| Securities Offered | <p>\$1,200,000,000 aggregate principal amount of senior notes, consisting of the following:</p> <ul style="list-style-type: none">• \$300,000,000 of 1.65% senior notes due June 15, 2018;• \$400,000,000 of 2.45% senior notes due June 15, 2020; and• \$500,000,000 of 3.55% senior notes due June 15, 2025. |
| Maturity Date | <p>The 2018 Notes will mature on June 15, 2018.</p> <p>The 2020 Notes will mature on June 15, 2020.</p> <p>The 2025 Notes will mature on June 15, 2025.</p> |
| Interest Payment Dates | June 15 and December 15, beginning December 15, 2015. |
| Optional Redemption | <p>At any time prior to June 15, 2018, in the case of the 2018 Notes (which is the date of maturity), May 15, 2020, in the case of the 2020 Notes, and March 15, 2025, in the case of the 2025 Notes, we may redeem each series of the Notes in whole or in part at the applicable make-whole redemption prices determined as described under Certain Terms of the Notes Redemption at Our Option. At any time on or after May 15, 2020, in the case of the 2020 Notes, and March 15, 2025, in the case of the 2025 Notes, we may redeem the 2020 Notes and the 2025 Notes, in whole or in part, at 100% of the principal amount of the Notes of such series being redeemed plus accrued and unpaid interest on such Notes to, but not including, the redemption date. We are not required to establish a sinking fund to retire the Notes prior to maturity.</p> |
| Special Mandatory Redemption | <p>If we do not consummate the proposed Acquisition on or before December 22, 2015, or if the Merger Agreement is terminated at any time prior thereto, we must redeem all of the Notes at a redemption price equal to 101% of the aggregate principal amount of the Notes, plus accrued and unpaid interest from the date of initial issuance to, but not including, the special mandatory redemption date. See Certain Terms of the Notes Special Mandatory Redemption.</p> |
| Ranking | <p>The Notes are unsecured and unsubordinated and will rank equally with all our other unsecured and unsubordinated indebtedness and other obligations from time to time outstanding. See Description of Debt Securities Ranking of Debt Securities in the accompanying prospectus.</p> |

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|-------------------------------|--|
| <p>Covenants</p> | <p>For so long as any Notes remain outstanding, we will not create or incur or allow any of our subsidiaries to create or incur any pledge or security interest on any of the capital stock of Wisconsin Electric or Wisconsin Gas held by us or one of our subsidiaries on the issue date of the Notes. The indenture for the Notes also limits our ability to enter into mergers, consolidations or sales of all or substantially all of our assets where we are not the surviving corporation unless the successor company assumes all of our obligations under the indenture. These covenants are subject to a number of important qualifications and limitations. See Certain Terms of the Notes Covenants.</p> |
| | |
| <p>Use of Proceeds</p> | <p>We will use the estimated \$1.19 billion in net proceeds from this offering to fund a portion of the cash consideration for the proposed Acquisition and related transaction costs and for other general corporate purposes. See Use of Proceeds.</p> |
| | |
| <p>Trustee</p> | <p>The trustee under the indenture (the Trustee) is The Bank of New York Mellon Trust Company, N.A.</p> |

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The information set forth below is qualified in its entirety by reference to and, therefore, should be read together with management's discussion and analysis of results of operations and financial condition, the financial statements and related notes and other financial information incorporated by reference in this prospectus supplement and in the accompanying prospectus. See "Documents Incorporated by Reference" in this prospectus supplement and "Where You Can Find More Information" in the accompanying prospectus.

Consolidated Income Statement and Related Information**of Wisconsin Energy Corporation**

| | Three Months Ended March 31, | | Year Ended December 31, | | | | | | | | | |
|---------------------------------------|------------------------------|---------|-------------------------|---------|------|---------|------|---------|----|---------|----|---------|
| | 2015(1) | | 2014 | 2013 | 2012 | 2011 | 2010 | | | | | |
| (Dollars in Millions) | (unaudited) | | | | | | | | | | | |
| Operating Revenues | \$ | 1,387.9 | \$ | 4,997.1 | \$ | 4,519.0 | \$ | 4,246.4 | \$ | 4,486.4 | \$ | 4,202.5 |
| Operating Income | \$ | 358.8 | \$ | 1,112.1 | \$ | 1,080.1 | \$ | 1,000.3 | \$ | 887.3 | \$ | 810.4 |
| Net Income | \$ | 195.8 | \$ | 588.3 | \$ | 577.4 | \$ | 546.3 | \$ | 526.2 | \$ | 456.5 |
| Ratio of Earnings to Fixed Charges(2) | | 5.8x | | 4.6x | | 4.2x | | 3.9x | | 3.6x | | 3.3x |

(1) The results of operations for the three months ended March 31, 2015, are not necessarily indicative of the results that may be expected for the entire 2015 fiscal year because of seasonal and other factors.

(2) These computations include us and our subsidiaries. For these ratios, earnings is determined by adding (a) pre-tax income from continuing operations (less undistributed equity in earnings of our unconsolidated affiliates), (b) non-utility amortization of capitalized interest and (c) fixed charges, and subtracting from the total, capitalized interest. Fixed charges consists of interest charges on our long-term and short-term debt (including a representative portion of lease expense), capitalized interest, amortization of debt expenses and an amount equal to the earnings before income taxes required to pay preferred dividends of a subsidiary.

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RISK FACTORS

Investing in the Notes involves risk. Please see the Risk Factors described in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2014, which are incorporated by reference in this prospectus supplement and the accompanying prospectus, as well as the risks discussed under the heading Risk Factors in our Registration Statement on Form S-4 filed on August 13, 2014, amended on September 22, 2014 and October 3, 2014 and declared effective by the Securities and Exchange Commission (SEC) on October 6, 2014. Before making an investment decision, you should carefully consider these risks as well as other information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus. The risks and uncertainties described are not the only ones facing us. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations, financial results and the value of our securities.

FORWARD-LOOKING STATEMENTS AND CAUTIONARY FACTORS

We have included or may include statements in this prospectus supplement and the accompanying prospectus (including documents incorporated by reference) that constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (Securities Act), and Section 21E of the Securities Exchange Act of 1934, as amended (Exchange Act). Any statements that express, or involve discussions as to, expectations, beliefs, plans, objectives, assumptions or future events or performance may be forward-looking statements. Also, forward-looking statements may be identified by reference to a future period or periods or by the use of forward-looking terminology such as anticipates, believes, could, estimates, expects, forecasts, goals, guidance, intends, may, objectives, plans, possible, should, targets, will or similar terms or variations of these terms.

We caution you that any forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to differ materially from the future results, performance or achievements we have anticipated in the forward-looking statements.

In addition to the assumptions and other factors referred to specifically in connection with those statements, factors that could cause our actual results to differ materially from those contemplated in the forward-looking statements include factors we have described under the captions Cautionary Statement Regarding Forward-Looking Information and Risk Factors in our Annual Report on Form 10-K for the year ended December 31, 2014, and under the caption Factors Affecting Results, Liquidity and Capital Resources in the Management s Discussion and Analysis of Financial Condition and Results of Operations section of our Annual Report on Form 10-K for the year ended December 31, 2014, or under similar captions in the other documents we have incorporated by reference. Any forward-looking statement speaks only as of the date on which that statement is made, and we do not undertake any obligation to update any forward-looking statement to reflect events or circumstances, including unanticipated events, after the date on which that statement is made.

USE OF PROCEEDS

We estimate the net proceeds to us from the offering to be approximately \$1.19 billion, after deducting underwriting discounts and other offering expenses payable by us. We intend to use the net proceeds from the offering to fund a portion of the cash consideration for the proposed Acquisition and related transaction costs and for other general corporate purposes.

Pending the consummation of the proposed Acquisition, we intend to invest the proceeds of the offering in U.S. governmental securities and other high quality U.S. securities.

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The table below shows our consolidated capitalization structure on an actual basis.

| | As of March 31, 2015 | |
|-------------------------------|--|---|
| | Actual Amount (unaudited) (Dollars in Millions) | Percentage (Rounded to Tenths) |
| Short-term debt | \$ 563.0 | 5.8% |
| Long-term debt(1) | \$ 4,596.0 | 47.4% |
| Preferred stock of subsidiary | \$ 30.4 | 0.3% |
| Common equity | \$ 4,510.6 | 46.5% |
| Total | \$ 9,700.0 | 100.0% |

(1) Includes current maturities.

Wisconsin Electric is the obligor under two series of tax-exempt pollution control refunding bonds in outstanding principal amount of \$147 million. In August 2009, Wisconsin Electric terminated letters of credit that provided credit and liquidity support for the bonds, which resulted in a mandatory tender of the bonds. Wisconsin Electric issued commercial paper to fund the purchase of the bonds. As of March 31, 2015, the repurchased bonds were still outstanding, but were not reported as long-term debt because they are held by Wisconsin Electric. Depending on market conditions and other factors, Wisconsin Electric may change the method used to determine the interest rate on the bonds and have them remarketed to third parties.

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CERTAIN TERMS OF THE NOTES

The following description of the particular terms of the Notes supplements and, to the extent inconsistent therewith, replaces the description of the general terms and provisions of the Notes set forth in the accompanying prospectus under Description of Debt Securities.

We will issue the Notes under the indenture, dated as of March 15, 1999, between Wisconsin Energy and The Bank of New York Mellon Trust Company, N.A. (as successor to The First National Bank of Chicago), as Trustee (as amended and supplemented, the indenture). The Notes will be our direct unsecured general obligations. At March 31, 2015, the aggregate principal amount of debt securities outstanding under the indenture was \$700 million.

General

The Notes will be unsecured and unsubordinated and will rank equally with all of our other unsecured and unsubordinated indebtedness and other obligations from time to time outstanding. At March 31, 2015, we had \$700 million aggregate principal amount of unsecured long-term debt securities and no commercial paper outstanding.

Interest on the Notes accrues at the rate of 1.65% per year for the 2018 Notes, 2.45% per year for the 2020 Notes and 3.55% per year for the 2025 Notes. Interest will accrue from June 10, 2015, or from the most recent interest payment date to which interest has been paid or provided for. Interest is payable semi-annually in arrears to holders of record at the close of business on the June 1 or December 1 immediately preceding the interest payment date. Interest payment dates will be June 15 and December 15 of each year beginning on December 15, 2015. Interest will be computed on the basis of a 360-day year consisting of twelve 30-day months.

The 2018 Notes will mature on June 15, 2018, the 2020 Notes will mature on June 15, 2020 and the 2025 Notes will mature on June 15, 2025.

The Notes will be issued only in registered form in denominations of \$1,000 and integral multiples of \$1,000.

Redemption at Our Option

At any time prior to the maturity date for the 2018 Notes, we may redeem the 2018 Notes, in whole or in part from time to time, at a make-whole redemption price for the 2018 Notes, calculated by us, equal to (a) the greater of (i) 100% of the principal amount of the 2018 Notes being redeemed or (ii) the sum of the present values of the remaining scheduled payments of principal and interest on the 2018 Notes being redeemed (exclusive of interest accrued to the date of redemption) discounted to the redemption date on a semiannual basis (assuming a 360-day year consisting of twelve 30-day months) at the Treasury Rate plus 10 basis points, plus (b) accrued and unpaid interest on the 2018 Notes being redeemed to, but not including, the redemption date.

At any time prior to the applicable Early Call Date, each of the 2020 Notes and the 2025 Notes will be redeemable in whole or in part from time to time, at our option, at a make-whole redemption price for such series, calculated by us, equal to (a) the greater of (i) 100% of the principal amount of the Notes of such series being redeemed or (ii) the sum of the present values of the remaining scheduled payments of principal and interest on the Notes of such series being redeemed that would be due if such Notes matured on the applicable Early Call Date but for the redemption (exclusive of interest accrued to the date of redemption) discounted to the redemption date on a semiannual basis (assuming a 360-day year consisting of twelve 30-day months) at the Treasury Rate plus 15 basis points in the case of the 2020 Notes and 20 basis points in the case of the 2025 Notes, plus (b) accrued and unpaid interest on the Notes of such series being redeemed to, but not including, the redemption date.

At any time on or after the applicable Early Call Date, we may redeem each of the 2020 Notes and the 2025 Notes, in whole or in part from time to time, at 100% of the principal amount of the Notes of such series being redeemed plus accrued and unpaid interest on such Notes to, but not including, the redemption date.

Comparable Treasury Issue means, with respect to each series of the Notes, the United States Treasury security or securities selected by an Independent Investment Banker as having an actual or interpolated maturity comparable to the remaining term of the Notes of such series being redeemed (assuming, for this purpose, that the 2020 Notes and the 2025 Notes mature on the applicable Early Call Date) that would be utilized, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities of a comparable maturity to the remaining term of such Notes.

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Comparable Treasury Price means, with respect to each series of the Notes and any redemption date, (a) the average of the Reference Treasury Dealer Quotations for such series and such redemption date, after excluding the highest and lowest such Reference Treasury Dealer Quotations, or (b) if the Trustee obtains fewer than four such Reference Treasury Dealer Quotations, the average of all such quotations.

Early Call Date means, with respect to the 2020 Notes, May 15, 2020 (the date that is one month prior to the maturity date for the 2020 Notes) and, with respect to the 2025 Notes, March 15, 2025 (the date that is three months prior to the maturity date for the 2025 Notes).

Independent Investment Banker means one of the Reference Treasury Dealers appointed by the Trustee after consultation with us.

Reference Treasury Dealer means each of J.P. Morgan Securities LLC, Merrill Lynch, Pierce, Fenner & Smith Incorporated, BNP Paribas Securities Corp. and their respective successors, one primary U.S. government securities dealer in the City of New York, New York (a **Primary Treasury Dealer**) selected by each of KeyBanc Capital Markets, Inc. and Wells Fargo Securities, LLC and their respective successors and one other Primary Treasury Dealer selected by us. If any of the foregoing shall cease to be a Primary Treasury Dealer, we will select another Primary Treasury Dealer which will be substituted for that dealer.

Reference Treasury Dealer Quotations means, with respect to each Reference Treasury Dealer, each series of the Notes and any redemption date, the average, as determined by the Trustee, of the bid and asked prices for the Comparable Treasury Issue for such series (expressed in each case as a percentage of its principal amount) quoted in writing to the Trustee by such Reference Treasury Dealer at 3:30 p.m., New York City time, on the third business day preceding such redemption date.

Treasury Rate means, with respect to each series of the Notes and any redemption date, the rate per year equal to the semiannual equivalent yield to maturity or interpolated (on a day count basis) of the Comparable Treasury Issue for such series, assuming a price for such Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for such series and such redemption date; *provided* that, if the Reference Treasury Dealers shall determine that there is no such Comparable Treasury Issue, such rate per year shall be equal to the estimated semiannual equivalent yield to maturity that a United States Treasury security having a maturity comparable to the remaining term of the Notes of such series to be redeemed (assuming, for this purpose, that the 2020 Notes and the 2025 Notes mature on the applicable Early Call Date) would bear, if such security were available, such estimate to be made by the Reference Treasury Dealers on the basis of interpolation, extrapolation and other accepted financial practices, taking into account (a) the yields to maturity of United States Treasury securities of other maturities, (b) yields to maturity of other U.S. dollar denominated debt securities having a maturity comparable to the remaining term of the Notes of such series to be redeemed (assuming, for this purpose, that the 2020 Notes and the 2025 Notes mature on the applicable Early Call Date) and (c) applicable interest rate spreads between United States Treasury securities and such other debt securities, all as of 5:00 p.m., New York City time, on the third business day preceding such redemption date.

Special Mandatory Redemption

In the event that we do not consummate the proposed Acquisition on or prior to December 22, 2015, or the Merger Agreement is terminated at any time prior thereto, we will be required to redeem all of the Notes on the special mandatory redemption date (as defined below) at a special mandatory redemption price equal to 101% of the aggregate principal amount of the Notes, plus accrued and unpaid interest from the date of initial issuance to, but not including, the special mandatory redemption date (subject to the right of holders of record on the relevant record date

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to receive interest due on the relevant interest payment date). The special mandatory redemption date means the earlier to occur of (i) December 23, 2015 (or the earliest date thereafter permitted under the indenture), if the proposed Acquisition has not been completed on or prior to December 22, 2015, or (ii) the 45th day (or such earlier date as permitted under the indenture) following the termination of the Merger Agreement for any reason.

We will cause the notice of special mandatory redemption to be mailed to each holder at its registered address, with a copy to the Trustee, no later than five business days (or such longer period as may be required under the indenture) after the occurrence of the event triggering redemption. If funds sufficient to pay the special mandatory redemption price of the Notes on the special mandatory redemption date are deposited with the Trustee on or before such special mandatory redemption date, the Notes will cease to bear interest on and after such special mandatory redemption date.

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Other Terms Applicable to All Redemptions

We will mail notice of any redemption (other than a special mandatory redemption) at least 30 days, but not more than 60 days, before the redemption date to each holder of Notes to be redeemed.

Unless we default in payment of the redemption price, on and after the redemption date interest will cease to accrue on the Notes or portions of the Notes called for redemption.

Except in the case of a conditional redemption, as discussed below, once notice of redemption is given, the Notes called for redemption become due and payable on the redemption date at the redemption price stated in the notice.

A notice of redemption may be conditioned and provide that it is subject to the occurrence of any event described in the notice before the date fixed for the redemption. A notice of conditional redemption will be of no effect unless all conditions to the redemption have occurred before the redemption date or have been waived by us.

Covenants

Limitation on Liens on Stock of Certain Subsidiaries

For so long as any Notes remain outstanding, we will not create or incur or allow any of our subsidiaries to create or incur any pledge or security interest on any of the capital stock of Wisconsin Electric or Wisconsin Gas held by us or one of our subsidiaries on the issue date of the Notes.

Limitation on Mergers, Consolidations and Sales of Assets

The indenture provides that we will not consolidate with or merge into another company in a transaction in which we are not the surviving company, or transfer all or substantially all of our assets to another company, unless:

- that company is organized under the laws of the United States or a state thereof or is organized under the laws of a foreign jurisdiction and consents to the jurisdiction of the courts of the United States or a state thereof;

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- that company assumes by supplemental indenture all of our obligations under the indenture and the Notes;
- all required approvals of any regulatory body having jurisdiction over the transaction shall have been obtained; and
- immediately after the transaction no default exists under the indenture.

The successor will be substituted for us as if it had been an original party to the indenture, securities resolutions and the Notes. Thereafter, the successor may exercise our rights and powers under the indenture and the Notes, and all of our obligations under those documents will terminate.

Events of Default

In addition to the events of default described in the accompanying prospectus under the heading "Description of Debt Securities - Defaults and Remedies," an event of default under the Notes will include our failure to pay when due principal, interest or premium in an aggregate amount of \$25 million or more with respect to any of our Indebtedness, or the acceleration of any of our Indebtedness aggregating \$25 million or more which default is not cured, waived or postponed pursuant to an agreement with the holders of the Indebtedness within 60 days after written notice as provided in the indenture governing the Notes, or the acceleration is not rescinded or annulled within 30 days after written notice as provided in the indenture governing the Notes. As used in this paragraph, "Indebtedness" means the following obligations of Wisconsin Energy and its principal utility subsidiaries, Wisconsin Electric and Wisconsin Gas (and specifically excludes obligations of Wisconsin Energy's other subsidiaries and intercompany obligations):

- all obligations for borrowed money;
- all obligations evidenced by bonds, debentures, notes or similar instruments, or upon which interest payments are customarily made;

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- all obligations under conditional sale or other title retention agreements relating to property purchased by us to the extent of the value of the property (other than customary reservations or retentions of title under agreements with suppliers entered into in the ordinary course of our business); and
- all obligations issued or assumed as the deferred purchase price of property or services purchased by us which would appear as liabilities on our balance sheet.

Other

The Notes will be subject to defeasance under the conditions described in the accompanying prospectus.

We may from time to time without notice to, or the consent of, the holders of a series of Notes, create and issue further notes of the same series, equal in rank to the Notes in all respects (or in all respects except for the payment of interest accruing prior to the issue date of the new notes or, if applicable, the first payment of interest following the issue date of the new notes) so that the new notes may be consolidated and form a single series with the relevant series of Notes and have the same terms as to status, redemption or otherwise as the relevant series of Notes. In the event that we issue additional notes of the same series, we will prepare a new offering memorandum or prospectus.

The indenture and the Notes will be governed by the laws of the State of Wisconsin, unless federal law governs.

Book-Entry Only Issuance The Depository Trust Company

The Depository Trust Company (DTC), New York, NY, will act as the securities depository for the Notes. The Notes will be issued only as fully-registered securities registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. Upon issuance, each series of the Notes will be represented by one or more fully-registered global note certificates, representing in the aggregate the total principal amount of such series of the Notes, and will be deposited with the Trustee on behalf of DTC.

DTC, the world's largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a banking organization within the meaning of the New York Banking Law, a member of the Federal Reserve System, a clearing corporation within the meaning of the New York Uniform Commercial Code and a clearing agency registered pursuant to the provisions of Section 17A of the Exchange Act. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues and money market instruments from over 100 countries that DTC's participants (Direct Participants) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation (DTCC).

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DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (Indirect Participants). The DTC Rules applicable to its Participants are on file with the SEC. More information about DTC can be found at <http://www.dtcc.com>. The contents of such website do not constitute part of this prospectus supplement or the accompanying prospectus.

Purchases of the Notes within the DTC system must be made by or through Direct Participants, which will receive a credit for the Notes on DTC's records. The ownership interest of each actual purchaser of each Note (Beneficial Owner) is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchases. Beneficial Owners, however, are expected to receive written confirmations providing details of the transactions, as well as periodic statements of their holdings, from the Direct or Indirect Participants through which the Beneficial Owners purchased Notes. Transfers of ownership interests in the Notes are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the Notes, except in the event that use of the book-entry system for the notes is discontinued.

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To facilitate subsequent transfers, all Notes deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of the Notes with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any changes in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Notes. DTC's records reflect only the identity of the Direct Participants to whose accounts such Notes are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

Redemption notices will be sent to DTC. If less than all the Notes are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such Notes to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Notes unless authorized by a Direct Participant in accordance with DTC's procedures. Under its usual procedures, DTC mails an Omnibus Proxy to us as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Notes are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Payments on the Notes will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from us or the Trustee on the relevant payment date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the account of customers registered in street name, and will be the responsibility of such Participant and not of DTC or Wisconsin Energy, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of Wisconsin Energy, disbursement of such payments to Direct Participants is the responsibility of DTC, and disbursement of such payments to the Beneficial Owners is the responsibility of Direct and Indirect Participants.

Except as provided herein, a Beneficial Owner of a global Note will not be entitled to receive physical delivery of a Note. Accordingly, each Beneficial Owner must rely on the procedures of DTC to exercise any rights under the Notes. The laws of some jurisdictions require that certain purchasers of securities take physical delivery of securities in definitive form. Such laws may impair the ability to transfer beneficial interests in a global Note.

DTC may discontinue providing its services as securities depository with respect to the Notes at any time by giving reasonable notice to us. Under such circumstances, in the event that a successor securities depository is not obtained, Note certificates will be required to be printed and delivered to the holders of record. Additionally, we may decide to discontinue use of the system of book-entry transfers through DTC (or a successor securities depository) with respect to the Notes. We understand, however, that under current industry practices, DTC would notify its Direct and Indirect Participants of our decision, but will only withdraw beneficial interests from a global Note at the request of each Direct or Indirect Participant. In that event, certificates for the Notes will be printed and delivered to the applicable Direct or Indirect Participant.

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The information in this section concerning DTC and DTC's book-entry system has been obtained from sources that we believe to be reliable, but neither we nor any underwriter takes any responsibility for the accuracy thereof. Neither we nor any underwriter has any responsibility for the performance by DTC or its Direct or Indirect Participants of their respective obligations as described herein or under the rules and procedures governing their respective operations.

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Under the terms and subject to the conditions contained in an underwriting agreement dated the date of this prospectus supplement, the underwriters named below, for whom J.P. Morgan Securities LLC, Merrill Lynch, Pierce, Fenner & Smith Incorporated, BNP Paribas Securities Corp., KeyBanc Capital Markets Inc. and Wells Fargo Securities, LLC are acting as representatives, have severally agreed to purchase, and we have agreed to sell to them, severally, the principal amount of each series of the Notes indicated in the following table:

| Underwriter | Principal Amount of 2018 Notes | Principal Amount of 2020 Notes | Principal Amount of 2025 Notes |
|---|---|---|---|
| J.P. Morgan Securities LLC | \$ 60,000,000 | \$ 80,000,000 | \$ 100,000,000 |
| Merrill Lynch, Pierce, Fenner & Smith Incorporated | 60,000,000 | 80,000,000 | 100,000,000 |
| BNP Paribas Securities Corp. | 48,000,000 | 64,000,000 | 80,000,000 |
| KeyBanc Capital Markets Inc. | 48,000,000 | 64,000,000 | 80,000,000 |
| Wells Fargo Securities, LLC | 48,000,000 | 64,000,000 | 80,000,000 |
| Loop Capital Markets LLC | 12,000,000 | 16,000,000 | 20,000,000 |
| PNC Capital Markets LLC | 12,000,000 | 16,000,000 | 20,000,000 |
| Samuel A. Ramirez & Company, Inc. | 12,000,000 | 16,000,000 | 20,000,000 |
| Total | \$ 300,000,000 | \$ 400,000,000 | \$ 500,000,000 |

The underwriters are offering the Notes subject to their acceptance of the Notes from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the Notes offered by this prospectus supplement are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the Notes offered by this prospectus supplement if any are taken.

Notes sold by the underwriters to the public will initially be offered at the initial public offering price set forth on the cover page of this prospectus supplement. Any Notes sold by the underwriters to securities dealers may be sold at a discount from the initial public offering price of up to 0.200% of the principal amount of the 2018 Notes, 0.350% of the principal amount of the 2020 Notes and 0.400% of the principal amount of the 2025 Notes. Any such securities dealers may resell any Notes purchased from the underwriters to certain other brokers or dealers at a discount from the initial public offering price of up to 0.025% of the principal amount of the 2018 Notes, 0.125% of the principal amount of the 2020 Notes and 0.250% of the principal amount of the 2025 Notes. After the initial public offering of the Notes, the offering price and other selling terms may from time to time be varied by the representatives. The offering of the Notes by the underwriters is subject to receipt and acceptance and subject to the underwriters' right to reject any order in whole or in part.

The following table shows the underwriting discounts that we are to pay to the underwriters in connection with this offering (expressed as a percentage of the principal amount of each series of the Notes).

| | Paid by Wisconsin Energy |
|---------------|-------------------------------------|
| Per 2018 Note | 0.350% |
| Per 2020 Note | 0.600% |
| Per 2025 Note | 0.650% |

In order to facilitate the offering of the Notes, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the Notes. Specifically, the underwriters may over-allot in connection with the offering, creating a short position in the Notes for their own account. In addition, to cover over-allotments or to stabilize the price of the Notes, the underwriters may bid for, and purchase, Notes on the open market. Short sales involve the sale by the underwriters of a greater number of Notes than they are required to purchase in the offering. Stabilizing transactions consist of certain bids or purchases made for the purpose of preventing or retarding a decline in the market price of the Notes while the offering is in progress. Finally, the underwriters may reclaim selling concessions allowed to an underwriter or a dealer for distributing the Notes in the offering, if the underwriters repurchase previously distributed Notes in transactions to cover syndicate short positions, in stabilization transactions

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or otherwise. Any of these activities may stabilize or maintain the market price of the Notes above independent market levels. The underwriters are not required to engage in these activities and may end any of these activities at any time. These transactions may be effected in the over-the-counter market or otherwise.

The underwriters also may impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased Notes sold by or for the account of such underwriter in stabilizing or short covering transactions.

The Notes are a new issue of debt securities with no established trading market. We have been advised by the underwriters that they intend to make a market in the Notes, but they are not obligated to do so and may discontinue market making at any time without notice. We cannot assure you as to the liquidity of the trading market for the Notes.

We estimate that our total expenses for this offering, not including the underwriting discount, will be approximately \$2,500,000 and will be payable by us.

We expect to deliver the Notes against payment for the Notes on or about the date specified in the last paragraph on the cover page of this prospectus supplement, which will be the fourth business day following the date of the pricing of the Notes (this settlement cycle being referred to as T+4). Under Rule 15c6-1 under the Exchange Act, trades in the secondary market generally are required to settle in three business days, unless the parties to any such trade expressly agree otherwise. Accordingly, purchasers who wish to trade Notes on the date of pricing will be required, by virtue of the fact that the Notes initially will settle in T+4, to specify alternate settlement arrangements to prevent a failed settlement. Purchasers of Notes who wish to trade Notes on the date of pricing should consult their own advisors.

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. In the ordinary course of their respective businesses, certain of the underwriters and their affiliates have provided, currently provide and may in the future provide, investment banking, commercial banking, advisory and other services for us and our affiliates, for which they received or will receive customary fees and expenses. Affiliates of each of the book-running managers are lenders under our existing \$400 million credit facility, Wisconsin Electric's existing \$500 million credit facility and Wisconsin Gas' existing \$350 million credit facility.

In the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments, including serving as counterparties to certain derivative hedging arrangements, and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers. Such investment and securities activities may involve securities and instruments of Wisconsin Energy and its affiliates. Certain of the underwriters or their respective affiliates that have a lending relationship with us routinely hedge, and certain other of those underwriters or their respective affiliates may hedge, their credit exposure to us consistent with their customary risk management policies. Typically, such underwriters and their affiliates would hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities, including potentially the Notes offered hereby. Any such credit default swaps or short positions could adversely affect future trading prices of the Notes offered hereby. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

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We have agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments that the underwriters may be required to make because of any of those liabilities.

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LEGAL MATTERS

Various legal matters in connection with the Notes will be passed upon (a) for us by Mercer Thompson LLC, Atlanta, Georgia, and (b) for the underwriters by Hunton & Williams LLP, New York, New York. Joshua M. Erickson, Counsel of Wisconsin Energy, will pass upon the validity of the Notes, as well as certain other legal matters, on our behalf. Mr. Erickson is the beneficial owner of less than 0.01% of Wisconsin Energy's common stock.

EXPERTS

The consolidated financial statements, and the related financial statement schedules, incorporated in this prospectus supplement and the accompanying prospectus by reference from our Annual Report on Form 10-K for the year ended December 31, 2014, and the effectiveness of our internal control over financial reporting have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their reports, which are incorporated herein by reference. Such consolidated financial statements and financial statement schedules have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

The consolidated financial statements, and the related financial statement schedules, as of December 31, 2014 and 2013, and for the years ended December 31, 2014, 2013 and 2012, of Integrys Energy Group, Inc., which are incorporated in this prospectus supplement and the accompanying prospectus by reference from the Current Report on Form 8-K of Wisconsin Energy filed on May 22, 2015, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is incorporated herein by reference. Such consolidated financial statements and financial statement schedules have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

The financial statements as of December 31, 2014 and 2013, and for the years ended December 31, 2014, 2013 and 2012, of American Transmission Company LLC, which are incorporated in this prospectus supplement and the accompanying prospectus by reference from the Current Report on Form 8-K of Wisconsin Energy filed on May 22, 2015, have been audited by Deloitte & Touche LLP, independent auditors, as stated in their report, which is incorporated herein by reference. Such financial statements have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

DOCUMENTS INCORPORATED BY REFERENCE

We file annual, quarterly and current reports, as well as registration and proxy statements and other information, with the SEC. Our SEC filings (File No. 001-09057) are available to the public over the Internet at the SEC's web site at <http://www.sec.gov>. You may also read and copy any document we file at the SEC's Public Reference Room at 100 F Street NE, Washington, D.C. 20549. You can call the SEC at 1-800-732-0330 for further information about the Public Reference Room.

The SEC allows us to incorporate by reference into this prospectus supplement and the accompanying prospectus the information we file with the SEC, which means we can disclose important information to you by referring you to those documents. Please refer to "Where You Can Find

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More Information in the accompanying prospectus. Any information referenced this way is considered to be part of the accompanying prospectus, and any information that we file later with the SEC will automatically update and supersede this information. At the date of this prospectus supplement, we incorporate by reference the following documents that we have filed with the SEC, and any future filings that we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act until we complete our sale of the securities to the public:

- Our Annual Report on Form 10-K for the year ended December 31, 2014;
- Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2015; and
- Our Current Reports on Form 8-K filed on January 13, 2015, March 13, 2015, April 23, 2015, April 30, 2015, May 12, 2015 and May 22, 2015.

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Information furnished under Items 2.02 or 7.01 of any Current Report on Form 8-K will not be incorporated by reference into this prospectus supplement or the accompanying prospectus unless specifically stated otherwise. We will provide, at no cost, to each person, including any beneficial owner, to whom this prospectus supplement and the accompanying prospectus are delivered, a copy of any or all of the information that has been incorporated by reference into, but not delivered with, this prospectus supplement and the accompanying prospectus, upon written or oral request to us at:

Wisconsin Energy Corporation

231 West Michigan Street

P. O. Box 1331

Milwaukee, Wisconsin 53201

Attn: Ms. Susan H. Martin, Executive Vice President, General Counsel and Corporate Secretary

Telephone: (414) 221-2345

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PROSPECTUS

WISCONSIN ENERGY CORPORATION

Debt Securities

Wisconsin Energy Corporation may issue and sell debt securities to the public. We urge you to read this prospectus and the applicable prospectus supplement carefully before you make your investment decision.

This prospectus describes some of the general terms that may apply to these debt securities. The specific terms of any debt securities to be offered, and any other information relating to a specific offering, will be set forth in a prospectus supplement that will describe the interest rates, payment dates, ranking, maturity and other terms of any debt securities that we issue or sell.

We may offer and sell these debt securities to or through one or more underwriters, dealers and agents, or directly to purchasers, on a continuous or delayed basis. The supplements to this prospectus will provide the specific terms of the plan of distribution. This prospectus may not be used to offer and sell securities unless accompanied by a prospectus supplement.

Our common stock is quoted on the New York Stock Exchange under the symbol WEC.

See Risk Factors on page 1 for information on certain risks related to the purchase of the debt securities.

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

The date of this prospectus is May 29, 2015.

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ABOUT THIS PROSPECTUS

In this prospectus, we, us, our and Wisconsin Energy refer to Wisconsin Energy Corporation.

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (SEC) utilizing a shelf registration process. Under this shelf process, we may issue and sell to the public the debt securities described in this prospectus in one or more offerings.

This prospectus provides you with only a general description of the debt securities we may issue and sell. Each time we issue and sell debt securities, we will provide a prospectus supplement that will contain specific information about the particular debt securities and terms of that offering. In the prospectus supplement, we will describe the interest rate, payment dates, ranking, maturity and other terms of any debt securities that we issue and sell.

The prospectus supplement will also describe the proceeds and uses of proceeds from the debt securities, together with the names and compensation of the underwriters, if any, through which the debt securities are being issued and sold, and other important considerations for investors. The prospectus supplement may also add to, update or change information contained in this prospectus.

If there is any inconsistency between the information in this prospectus and any prospectus supplement, you should rely on the information in the prospectus supplement. Please carefully read this prospectus and the applicable prospectus supplement, in addition to the information contained in the documents we refer you to under the heading WHERE YOU CAN FIND MORE INFORMATION.

RISK FACTORS

Investing in the securities of Wisconsin Energy involves risk. Please see the Risk Factors described in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2014, which are incorporated by reference in this prospectus. Before making an investment decision, you should carefully consider these risks as well as other information contained or incorporated by reference in this prospectus. The risks and uncertainties described are not the only ones facing us. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations, financial results and the value of our securities.

FORWARD-LOOKING STATEMENTS AND CAUTIONARY FACTORS

We have included or may include statements in this prospectus or in any prospectus supplement (including documents incorporated by reference) that constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Any statements that express, or involve discussions as to, expectations, beliefs, plans, objectives, assumptions or future events or performance may be forward-looking statements. Also, forward-looking statements

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may be identified by reference to a future period or periods or by the use of forward-looking terminology such as anticipates, believes, could, estimates, expects, forecasts, goals, guidance, intends, may, objectives, plans, possible, potential, projects, seeks, sl terms or variations of these terms.

We caution you that any forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to differ materially from the future results, performance or achievements we have anticipated in the forward-looking statements.

In addition to the assumptions and other factors referred to specifically in connection with those statements, factors that could cause our actual results to differ materially from those contemplated in the forward-looking statements include factors we have described under the captions Cautionary Statement Regarding Forward-Looking Information and Risk Factors in our Annual Report on Form 10-K for the year ended December 31, 2014, and under the caption Factors Affecting Results, Liquidity and Capital Resources in the Management s Discussion

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and Analysis of Financial Condition and Results of Operations section of our Annual Report on Form 10-K for the year ended December 31, 2014, or under similar captions in the other documents we have incorporated by reference. Any forward-looking statement speaks only as of the date on which that statement is made, and we do not undertake any obligation to update any forward-looking statement to reflect events or circumstances, including unanticipated events, after the date on which that statement is made.

WISCONSIN ENERGY

Wisconsin Energy Corporation was incorporated in the State of Wisconsin in 1981 and became a diversified holding company in 1986. We conduct our operations primarily in two reportable segments: a utility energy segment and a non-utility energy segment. Our primary subsidiaries are Wisconsin Electric Power Company (Wisconsin Electric), Wisconsin Gas LLC (Wisconsin Gas) and W.E. Power, LLC (We Power).

Utility Energy Segment: Our utility energy segment consists of Wisconsin Electric and Wisconsin Gas. As of March 31, 2015, we served approximately 1,136,300 electric customers in Wisconsin and the Upper Peninsula of Michigan, 1,092,100 gas customers in Wisconsin and 435 steam customers in metropolitan Milwaukee, Wisconsin. Wisconsin Electric and Wisconsin Gas operate under the trade name of We Energies.

Non-Utility Energy Segment: Our non-utility energy segment consists primarily of We Power, which owns and leases to Wisconsin Electric the generating capacity included in our Power the Future strategy.

On June 22, 2014, we entered into an agreement to acquire Integrys Energy Group, Inc. (Integrys). The combined company will serve approximately 1.6 million electric customers, 2.8 million gas customers, and own approximately 60% of American Transmission Company LLC. The proposed acquisition is subject to several conditions, including, among others, the receipt of approvals from various government agencies. For additional information on this proposed acquisition and the status of these approvals, see Note 3 Proposed Acquisition in the Notes to Consolidated Condensed Financial Statements and Corporate Developments in Item 2 of our Quarterly Report on Form 10-Q for the quarter ended March 31, 2015.

Our principal executive offices are located at 231 West Michigan Street, P.O. Box 1331, Milwaukee, Wisconsin 53201. Our telephone number is (414) 221-2345.

RATIO OF EARNINGS TO FIXED CHARGES

Our historical ratios of earnings to fixed charges are described below for the periods indicated.

Year Ended December 31,

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| | Three Months Ended March 31, 2015(1) | 2014 | 2013 | 2012 | 2011 | 2010 |
|---------------------------------------|---|-------------|-------------|-------------|-------------|-------------|
| Ratio of Earnings to Fixed Charges(2) | 5.8x | 4.6x | 4.2x | 3.9x | 3.6x | 3.3x |

(1) Results of operations for the three months ended March 31, 2015, are not necessarily indicative of the results that may be expected for the entire 2015 fiscal year because of seasonal and other factors.

(2) These computations include us and our subsidiaries. For these ratios, earnings is determined by adding (a) pre-tax income from continuing operations (less undistributed equity in earnings of our unconsolidated affiliates), (b) nonutility amortization of capitalized interest and (c) fixed charges, and subtracting from the total, capitalized interest. Fixed charges consists of interest charges on our long-term and short-term debt (including a representative portion of lease expense), capitalized interest, amortization of debt expenses and an amount equal to the earnings before income taxes required to pay preferred dividends of a subsidiary.

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USE OF PROCEEDS

Except as otherwise described in the applicable prospectus supplement, we intend to use the net proceeds from the sale of our debt securities to fund a portion of the cash consideration for our proposed acquisition of Integrys and related transaction costs, to repay and/or refinance debt, for investments (including equity contributions and loans to affiliates) and/or for other general corporate purposes. Pending disposition, we may temporarily invest any proceeds of the offering not required immediately for the intended purposes in U.S. governmental securities and other high quality U.S. securities. We expect to borrow money or sell securities from time to time, but we cannot predict the precise amounts or timing of doing so. For current information, please refer to our current filings with the SEC. See WHERE YOU CAN FIND MORE INFORMATION.

DESCRIPTION OF DEBT SECURITIES

The debt securities will be our direct unsecured general obligations. The debt securities will consist of one or more senior debt securities, subordinated debt securities and junior subordinated debt securities. The debt securities will be issued in one or more series under the indenture described below between us and The Bank of New York Mellon Trust Company, N.A. (as successor to The First National Bank of Chicago), as trustee, dated as of March 15, 1999, and under a securities resolution (which may be in the form of a resolution or a supplemental indenture) authorizing the particular series.

We have summarized selected provisions of the indenture and the debt securities that we may offer hereby. This summary is not complete and may not contain all of the information important to you. Copies of the indenture and a form of securities resolution are filed or incorporated by reference as exhibits to the registration statement of which this prospectus is a part. The securities resolution for each series of debt securities issued also has been or will be filed or incorporated by reference as an exhibit to the registration statement. You should read the indenture and the applicable securities resolution for provisions that may be important to you. In the summary below, where applicable, we have included references to section numbers in the indenture so that you can easily find those provisions. The particular terms of any debt securities we offer will be described in the related prospectus supplement, along with any applicable modifications of or additions to the general terms of the debt securities described below and in the indenture. For a description of the terms of any series of debt securities, you should also review both the prospectus supplement relating to that series and the description of the debt securities set forth in this prospectus before making an investment decision.

General

The indenture does not significantly limit our operations. In particular, it does not:

- limit the amount of debt securities that we can issue under the indenture;
- limit the number of series of debt securities that we can issue from time to time;

- restrict the total amount of debt that we or our subsidiaries may incur; or
- contain any covenant or other provision that is specifically intended to afford any holder of the debt securities protection in the event of highly leveraged transactions or any decline in our ratings or credit quality.

The ranking of a series of debt securities with respect to all of our indebtedness will be established by the securities resolution creating the series.

Although the indenture permits the issuance of debt securities in other forms or currencies, the debt securities covered by this prospectus will only be denominated in U.S. dollars in registered form without coupons, unless otherwise indicated in the applicable prospectus supplement.

Unless we say otherwise in the applicable prospectus supplement, we may redeem the debt securities for cash.

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Terms

A prospectus supplement and a securities resolution relating to the offering of any new series of debt securities will include specific terms relating to the offering. The terms will include some or all of the following:

- the designation, aggregate principal amount, currency or composite currency and denominations of the debt securities;
- the price at which the debt securities will be issued and, if an index, formula or other method is used, the method for determining amounts of principal or interest;
- the maturity date and other dates, if any, on which the principal of the debt securities will be payable;
- the interest rate or rates, if any, or method of calculating the interest rate or rates, which the debt securities will bear;
- the date or dates from which interest will accrue and on which interest will be payable and the record dates for the payment of interest;
- the manner of paying principal and interest on the debt securities;
- the place or places where principal and interest will be payable;
- the terms of any mandatory or optional redemption of the debt securities by us, including any sinking fund;
- the terms of any conversion or exchange right;
- the terms of any redemption of debt securities at the option of holders;

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- any tax indemnity provisions;
- if payments of principal or interest may be made in a currency other than U.S. dollars, the manner for determining those payments;
- the portion of principal payable upon acceleration of any discounted debt security (as described below);
- whether and upon what terms debt securities may be defeased (which means that we would be discharged from our obligations by depositing sufficient cash or government securities to pay the principal, interest, any premiums and other sums due to the stated maturity date or a redemption date of the debt securities of the series);
- whether any events of default or covenants in addition to or instead of those set forth in the indenture apply;
- provisions for electronic issuance of debt securities or for debt securities in uncertificated form;
- the ranking of the debt securities, including the relative degree, if any, to which the debt securities of a series are subordinated to one or more other series of debt securities in right of payment, whether outstanding or not;
- any provisions relating to extending or shortening the date on which the principal and premium, if any, of the debt securities of the series is payable;
- any provisions relating to the deferral of any interest; and
- any other terms not inconsistent with the provisions of the indenture, including any covenants or other terms that may be required or advisable under United States or other applicable laws or regulations or advisable in connection with the marketing of the debt securities. (Section 2.01)

We may issue debt securities of any series as registered debt securities, bearer debt securities or uncertificated debt securities. (Section 2.01) We may issue the debt securities of any series in whole or in part in the

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form of one or more global securities that will be deposited with, or on behalf of, a depository identified in the prospectus supplement relating to the series. We may issue global securities in registered, bearer or uncertificated form and in either temporary or permanent form. Unless and until it is exchanged in whole or in part for securities in definitive form, a global security may not be transferred except as a whole by the depository to a nominee or a successor depository. (Section 2.12) We will describe in the prospectus supplement relating to any series the specific terms of the depository arrangement with respect to that series.

Unless otherwise indicated in a prospectus supplement, we will issue registered debt securities in denominations of \$1,000 and whole multiples of \$1,000 and bearer debt securities in denominations of \$5,000 and whole multiples of \$5,000. We will issue one or more global securities in a denomination or aggregate denominations equal to the aggregate principal amount of outstanding debt securities of the series to be represented by that global security or securities. (Section 2.12)

In connection with its original issuance, no bearer debt security will be offered, sold or delivered to any location in the United States. We may deliver a bearer debt security in definitive form in connection with its original issuance only if a certificate in a form we specify to comply with United States laws and regulations is presented to us. (Section 2.04)

A holder of registered debt securities may request registration of a transfer upon surrender of the debt security being transferred at any agency we maintain for that purpose and upon fulfillment of all other requirements of the agent. (Sections 2.03 and 2.07)

We may issue debt securities under the indenture as discounted debt securities to be offered and sold at a substantial discount from the principal amount of those debt securities. Special U.S. federal income tax and other considerations applicable to discounted debt securities, if material, will be described in the related prospectus supplement. A discounted debt security is a debt security where the amount of principal due upon acceleration is less than the stated principal amount. (Sections 1.01 and 2.10)

Conversion and Exchange

The terms, if any, on which debt securities of any series will be convertible into or exchangeable for our common stock or other equity or debt securities, property, cash or obligations, or a combination of any of the foregoing, will be summarized in the prospectus supplement relating to the series. The terms may include provisions for conversion or exchange on a mandatory basis, at the option of the holder or at our option. (Sections 2.01 and 9.01)

Certain Covenants

Any restrictive covenants which may apply to a particular series of debt securities will be described in the related prospectus supplement.

Ranking of Debt Securities

Unless stated otherwise in a prospectus supplement, the debt securities issued under the indenture will rank equally and ratably with our other unsecured and unsubordinated debt. The debt securities will not be secured by any properties or assets and will represent our unsecured debt.

Because we are a holding company and conduct all of our operations through subsidiaries, holders of debt securities will generally have a position that is effectively junior to claims of creditors of our subsidiaries, including trade creditors, debt holders, secured creditors, taxing authorities, guarantee holders and any preferred stockholders. Various financing arrangements and regulatory requirements impose restrictions on the ability of our utility subsidiaries to transfer funds to us in the form of cash dividends, loans or advances. Under Wisconsin law, our utility subsidiaries are prohibited from loaning funds, either directly or indirectly, to us. The indenture does not limit us or our subsidiaries if we decide to issue additional debt. Some of our operating subsidiaries, including Wisconsin Electric and Wisconsin Gas, have ongoing corporate debt programs used to finance their business activities.

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As of March 31, 2015, our direct obligations included \$200 million of outstanding Senior Notes and \$500 million of Junior Subordinated Debentures. We have a \$400 million multi-year bank back-up credit facility to support our short-term debt, but we did not have any short-term debt outstanding at March 31, 2015. In addition, as of March 31, 2015, our utility subsidiaries had approximately \$563 million of outstanding short-term debt supported by multi-year bank back-up credit facilities and approximately \$5.5 billion of outstanding long-term debt (including approximately \$2.8 billion of capitalized leases, approximately \$2.7 billion of which are with subsidiaries of We Power and eliminated in consolidation). As of March 31, 2015, subsidiaries of We Power had approximately \$1.1 billion of outstanding Senior Notes with mortgage style principal amortizations, and our other non-utility subsidiaries had approximately \$72.1 million of outstanding long-term debt (including \$20.1 million of intercompany debt). Outstanding preferred stock of Wisconsin Electric as of March 31, 2015, had an aggregate liquidation preference value of \$30.4 million and was entitled to annual dividends of approximately \$1.2 million.

Successor Obligor

The indenture provides that, unless otherwise specified in the securities resolution establishing a series of debt securities, we will not consolidate with or merge into another company in a transaction in which we are not the surviving company, or transfer all or substantially all of our assets to another company, unless:

- that company is organized under the laws of the United States or a state thereof or is organized under the laws of a foreign jurisdiction and consents to the jurisdiction of the courts of the United States or a state thereof;
- that company assumes by supplemental indenture all of our obligations under the indenture, the debt securities and any coupons;
- all required approvals of any regulatory body having jurisdiction over the transaction shall have been obtained; and
- immediately after the transaction no default exists under the indenture.

The successor will be substituted for us as if it had been an original party to the indenture, securities resolutions and debt securities. Thereafter, the successor may exercise our rights and powers under the indenture, the debt securities and any coupons, and all of our obligations under those documents will terminate. (Section 5.01)

Exchange of Debt Securities

Registered debt securities may be exchanged for an equal principal amount of registered debt securities of the same series and date of maturity in authorized denominations requested by the holders upon surrender of the registered debt securities at an agency we maintain for that purpose and upon fulfillment of all other requirements of the agent. (Section 2.07)

To the extent permitted by the terms of a series of debt securities authorized to be issued in registered form and bearer form, bearer debt securities may be exchanged for an equal aggregate principal amount of registered or bearer debt securities of the same series and date of maturity in authorized denominations upon surrender of the bearer debt securities with all unpaid interest coupons, except as may otherwise be provided in the debt securities, at our agency maintained for that purpose and upon fulfillment of all other requirements of the agent. (Section 2.07) As of the date of this prospectus, we do not expect that the terms of any series of debt securities will permit registered debt securities to be exchanged for bearer debt securities.

Defaults and Remedies

Unless the securities resolution establishing the series provides for different events of default, in which event the prospectus supplement will describe any differences, an event of default with respect to a series of debt securities will occur if:

- we default in any payment of interest on any debt securities of that series when the payment becomes due and payable and the default continues for a period of 60 days;

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- we default in the payment of the principal and premium, if any, of any debt securities of that series when those payments become due and payable at maturity or upon redemption, acceleration or otherwise;

- we default in the payment or satisfaction of any sinking fund obligation with respect to any debt securities of that series as required by the securities resolution establishing that series and the default continues for a period of 60 days;

- we default in the performance of any of our other agreements applicable to that series and the default continues for 90 days after the notice specified below;

- pursuant to or within the meaning of any Bankruptcy Law we:
 - commence a voluntary case,
 - consent to the entry of an order for relief against us in an involuntary case,
 - consent to the appointment of a custodian for us or for all or substantially all of our property, or
 - make a general assignment for the benefit of our creditors;

- a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that remains unstayed and in effect for 60 days and that:
 - is for relief against us in an involuntary case,
 - appoints a custodian for us or for all or substantially all of our property, or
 - orders us to liquidate; or

- there occurs any other event of default provided for in that series. (Section 6.01)

The term **Bankruptcy Law** means Title 11, U.S. Code or any similar federal or state law for the relief of debtors. The term **custodian** means any receiver, trustee, assignee, liquidator or a similar official under any Bankruptcy Law. (Section 6.01)

A default under the indenture means any event which is, or after notice or passage of time would be, an event of default under the indenture. (Section 1.01) A default under the fourth bullet point above is not an event of default until the trustee or the holders of at least 25% in principal amount of the series notify us of the default and we do not cure the default within the time specified after receipt of the notice. (Section 6.01)

If an event of default occurs under the indenture and is continuing on a series, the trustee by notice to us, or the holders of at least 25% in principal amount of the series by notice both to us and to the trustee, may declare the principal of and accrued interest on all the debt securities of the series to be due and payable immediately. Discounted debt securities may provide that the amount of principal due upon acceleration is less than the stated principal amount. (Section 6.02)

The holders of a majority in principal amount of a series of debt securities, by notice to the trustee, may rescind an acceleration and its consequences if the rescission would not conflict with any judgment or decree and if all existing events of default on the series have been cured or waived except nonpayment of principal or interest that has become due solely because of the acceleration. (Section 6.02)

If an event of default occurs and is continuing on a series, the trustee may pursue any available remedy to collect principal or interest then due on the series, to enforce the performance of any provision applicable to the series or otherwise to protect the rights of the trustee and holders of the series. (Section 6.03)

The trustee may require indemnity satisfactory to it before it performs any duty or exercises any right or power under the indenture or the debt securities which it reasonably believes may expose it to any loss, liability or expense. (Section 7.01) With some limitations, holders of a majority in principal amount of the debt securities of a series may direct the trustee in its exercise of any trust or power with respect to that series. (Section 6.05) Except in

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the case of default in payment on a series, the trustee may withhold notice of any continuing default if it in good faith determines that withholding the notice is in the interest of holders of the series. (Section 7.04) We are required to furnish to the trustee annually a brief certificate as to our compliance with all conditions and covenants under the indenture. (Section 4.04)

The failure to redeem any debt securities subject to a conditional redemption is not an event of default if any event on which the redemption is conditioned does not occur and is not waived before the scheduled redemption date. (Section 6.01) Debt securities are subject to a conditional redemption if the notice of redemption relating to the debt securities provides that it is subject to the occurrence of any event before the date fixed for the redemption in the notice. (Section 3.04)

The indenture does not have a cross-default provision. Thus, a default by us on any other debt, including a default on another series of debt securities issued under the indenture, would not automatically constitute an event of default under the indenture. A securities resolution may provide for a cross-default provision. In that case, the prospectus supplement will describe the terms of that provision.

Amendments and Waivers

The indenture and the debt securities, or any coupons, of any series may be amended, and any default may be waived. Unless the securities resolution provides otherwise, in which event the prospectus supplement will describe the revised provision, we and the trustee may amend the indenture, the debt securities and any coupons with the written consent of the holders of a majority in principal amount of the debt securities of all series affected voting as one class. (Section 10.02)

Without the consent of each debt security holder affected, no amendment or waiver may:

- reduce the principal amount of debt securities whose holders must consent to an amendment or waiver;
- reduce the interest on or change the time for payment of interest on any debt security (subject to any right to defer one or more payments of interest we may have retained in the securities resolution and described in the prospectus supplement);
- change the fixed maturity of any debt security (subject to any right we may have retained in the securities resolution and described in the prospectus supplement);
- reduce the principal of any non-discounted debt security or reduce the amount of principal of any discounted debt security that would be due on its acceleration;

- change the currency in which the principal or interest on a debt security is payable;
- make any change that materially adversely affects the right to convert or exchange any debt security;
- waive any default in payment of interest on or principal of a debt security or any default in respect of a provision that pursuant to the indenture cannot be amended without the consent of each debt security holder affected; or
- make any change in the section of the indenture concerning waiver of past defaults or the section of the indenture concerning amendments without the consent of debt security holders, except to increase the amount of debt securities whose holders must consent to an amendment or waiver or to provide that other provisions of the indenture cannot be amended or waived without the consent of each holder of debt securities affected by the amendment or waiver. (Sections 6.04 and 10.02)

Without the consent of any debt security holder, we may amend the indenture or the debt securities:

- to cure any ambiguity, omission, defect, or inconsistency;

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- to provide for the assumption of our obligations to debt security holders by the surviving company in the event of a merger, consolidation or transfer of all or substantially all of our assets requiring such assumption;
- to provide that specific provisions of the indenture shall not apply to a series of debt securities not previously issued;
- to create a series of debt securities and establish its terms;
- to provide for a separate trustee for one or more series of debt securities; or
- to make any change that does not materially adversely affect the rights of any debt security holder. (Section 10.01)

Legal Defeasance and Covenant Defeasance

Debt securities of a series may be defeased at any time in accordance with their terms and as set forth in the indenture and described briefly below, unless the securities resolution establishing the terms of the series otherwise provides. Any defeasance may terminate all of our obligations (with limited exceptions) with respect to a series of debt securities and the indenture (legal defeasance), or it may terminate only our obligations under any restrictive covenants which may be applicable to a particular series (covenant defeasance). (Section 8.01)

We may exercise our legal defeasance option even though we have also exercised our covenant defeasance option. If we exercise our legal defeasance option, that series of debt securities may not be accelerated because of an event of default. If we exercise our covenant defeasance option, that series of debt securities may not be accelerated by reference to any restrictive covenants which may be applicable to that particular series. (Section 8.01)

To exercise either defeasance option as to a series of debt securities, we must:

- irrevocably deposit in trust with the trustee or another trustee money or U.S. government obligations;
- deliver to the trustee a certificate from a nationally recognized firm of independent accountants expressing their opinion that the payments of principal and interest when due on the deposited U.S. government obligations, without reinvestment, plus any deposited money without investment, will provide cash at the times and in the amounts necessary to pay the principal and interest when due on all debt securities

of the series to maturity or redemption, as the case may be; and

- comply with certain other conditions. In particular, we must obtain an opinion of tax counsel that the defeasance will not result in recognition of any gain or loss to holders for federal income tax purposes. (Section 8.02)

U.S. government obligations are direct obligations of (a) the United States or (b) an agency or instrumentality of the United States, the payment of which is unconditionally guaranteed by the United States, which, in either case (a) or (b), have the full faith and credit of the United States pledged for payment and which are not callable at the issuer's option. This term also includes certificates representing an ownership interest in such obligations. (Section 8.02)

Regarding the Trustee

Unless otherwise indicated in a prospectus supplement, The Bank of New York Mellon Trust Company, N.A. (as successor to JPMorgan Trust Company, National Association) (successor to Bank One Trust Company, N.A.) (successor to The First National Bank of Chicago) will act as trustee and registrar for debt securities issued under the indenture, and the trustee will also act as transfer agent and paying agent with respect to the debt securities. (Section 2.03) We may remove the trustee with or without cause if we notify the trustee three months in advance and if no default occurs during the three-month period. If the trustee resigns or is removed, or if a vacancy exists in the office of trustee for any reason, the indenture provides that we must promptly appoint a successor trustee. (Section 7.07) The trustee, in its individual or any other capacity, may make loans to, accept deposits from,

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and perform services for us or our affiliates, and may otherwise deal with us or our affiliates, as if it were not the trustee. (Section 7.02) In addition, the trustee serves as collateral agent for notes issued by non-utility subsidiaries of We Power. The trustee also serves as trustee for tax-exempt bonds for which Wisconsin Electric is the ultimate obligor. These tax-exempt bonds were repurchased by Wisconsin Electric in August 2009 and are still outstanding, but are not reported as long-term debt because they are held by Wisconsin Electric.

Governing Law

The indenture and the debt securities will be governed by and construed in accordance with the laws of the State of Wisconsin, except to the extent that the Trust Indenture Act of 1939 is applicable.

PLAN OF DISTRIBUTION

We may sell the debt securities covered by this prospectus in any one or more of the following ways from time to time: (a) to or through underwriters or dealers; (b) directly to one or more purchasers; (c) through agents; (d) through competitive bidding; or (e) any combination of the above. The prospectus supplement will set forth the terms of the offering of the debt securities being offered thereby, including the name or names of any underwriters, the purchase price of those debt securities and the proceeds to us from such sale, any underwriting discounts and other items constituting underwriters' compensation, any initial public offering price, any discounts or concessions allowed or reallocated or paid to dealers, and any securities exchange on which those debt securities may be listed. Only underwriters so named in the applicable prospectus supplement are deemed to be underwriters in connection with the debt securities offered thereby.

If underwriters are used in the sale, the debt securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase those debt securities will be subject to certain conditions precedent, and the underwriters will be obligated to purchase all the debt securities of the series offered by us and described in the applicable prospectus supplement if any of those debt securities are purchased. Any initial public offering price and any discounts or concessions allowed or reallocated or paid to dealers may be changed from time to time.

Debt securities may also be offered and sold, if so indicated in the prospectus supplement, in connection with a remarketing upon their purchase, in accordance with a redemption or repayment pursuant to their terms, by one or more firms (remarketing firms) acting as principals for their own accounts or as agents for us. Any remarketing firm will be identified and the terms of its agreement, if any, with us and its compensation will be described in the prospectus supplement. Remarketing firms may be deemed to be underwriters in connection with the debt securities remarketed thereby.

Debt securities may also be sold directly by us or through agents designated by us from time to time. Any agent involved in the offering and sale of the debt securities in respect of which this prospectus is delivered will be named, and any commissions payable by us to such agent will be set forth, in the prospectus supplement. Unless otherwise indicated in the prospectus supplement, any such agent will be acting on a best efforts basis for the period of its appointment.

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If so indicated in the prospectus supplement, we will authorize agents, underwriters or dealers to solicit offers by certain institutional investors to purchase debt securities providing for payment and delivery on a future date specified in the prospectus supplement. There may be limitations on the minimum amount which may be purchased by any such institutional investor or on the portion of the aggregate principal amount of the particular debt securities which may be sold pursuant to such arrangements. Institutional investors to which such offers may be made, when authorized, include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and such other institutions as may be approved by us. The obligations of any such purchasers pursuant to such delayed delivery and payment arrangements will not be subject to any conditions except (a) the purchase by an institution of the particular debt securities shall not at the time of delivery be prohibited under the laws of any jurisdiction in the United States to which such institution is subject, and (b) if the particular debt securities are being sold to underwriters, we shall have sold to such underwriters all of those debt securities other than the debt securities covered by such arrangements. Underwriters will not have any

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responsibility in respect of the validity of such arrangements or the performance by us or such institutional investors thereunder.

If any underwriter or any selling group member intends to engage in stabilizing, syndicate short covering transactions, penalty bids or any other transaction in connection with the offering of debt securities that may stabilize, maintain, or otherwise affect the price of those debt securities, such intention and a description of such transactions will be described in the prospectus supplement.

Agents and underwriters may be entitled under agreements entered into with us to indemnification by us against certain civil liabilities, including liabilities under the Securities Act of 1933, or to contribution with respect to payments which the agents or underwriters may be required to make in respect thereof. Agents and underwriters may engage in transactions with, or perform services for, us and our subsidiaries in the ordinary course of business.

LEGAL MATTERS

Unless otherwise indicated in the applicable prospectus supplement, various legal matters in connection with the debt securities will be passed upon (a) for us by Mercer Thompson LLC, Atlanta, Georgia, and (b) for any underwriters by Hunton & Williams LLP, New York, New York. Unless otherwise indicated in the applicable prospectus supplement, Joshua M. Erickson, Counsel of Wisconsin Energy, will pass upon the validity of the debt securities, as well as certain other legal matters, on our behalf. Mr. Erickson is the beneficial owner of less than 0.01% of our common stock.

EXPERTS

The consolidated financial statements, and the related financial statement schedules, incorporated in this prospectus by reference from our Annual Report on Form 10-K for the year ended December 31, 2014, and the effectiveness of our internal control over financial reporting have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their reports, which are incorporated herein by reference. Such consolidated financial statements and financial statement schedules have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

The consolidated financial statements, and the related financial statement schedules, as of December 31, 2014 and 2013, and for the years ended December 31, 2014, 2013 and 2012, of Integrys Energy Group, Inc., which are incorporated in this prospectus by reference from the Current Report on Form 8-K of Wisconsin Energy filed on May 22, 2015, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is incorporated herein by reference. Such consolidated financial statements and financial statement schedules have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

The financial statements as of December 31, 2014 and 2013, and for the years ended December 31, 2014, 2013 and 2012, of American Transmission Company LLC, which are incorporated in this prospectus by reference from the Current Report on Form 8-K of Wisconsin Energy filed on May 22, 2015, have been audited by Deloitte & Touche LLP, independent auditors, as stated in their report, which is incorporated herein

by reference. Such financial statements have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, as well as registration and proxy statements and other information, with the SEC. These documents may be read and copied at the Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You can get further information about the SEC's Public Reference Room by calling 1-800-SEC-0330. The SEC also maintains a website (<http://www.sec.gov>) that contains reports, registration statements and other information regarding registrants like us that file electronically with the SEC.

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The SEC allows us to incorporate by reference into this prospectus the information we file with it. This means that we can disclose important information to you by referring you to those documents. The information we incorporate by reference is considered a part of this prospectus, and later information we file with the SEC (File No. 001-09057) will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 until this offering is completed:

- Annual Report on Form 10-K for the year ended December 31, 2014.
- Quarterly Report on Form 10-Q for the quarter ended March 31, 2015.
- Current Reports on Form 8-K filed January 13, 2015, March 13, 2015, April 23, 2015, April 30, 2015, May 12, 2015, and May 22, 2015.

No information furnished under Items 2.02 or 7.01 of any Current Report on Form 8-K will be incorporated by reference in this prospectus unless specifically stated otherwise. You may request a copy of these documents at no cost by calling or writing to us at the following address:

Wisconsin Energy Corporation

231 West Michigan Street

P. O. Box 1331

Milwaukee, Wisconsin 53201

Attn: Ms. Susan H. Martin, Executive Vice President, General Counsel and Corporate Secretary

Telephone: (414) 221-2345

You should rely only on the information provided in or incorporated by reference (and not later changed) in this prospectus or any prospectus supplement. We have not authorized anyone else to provide you with additional or different information. We are not making an offer of any securities in any state where the offer is not permitted. You should not assume that the information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front of those documents.

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\$1,200,000,000

\$300,000,000 1.65% Senior Notes due June 15, 2018

\$400,000,000 2.45% Senior Notes due June 15, 2020

\$500,000,000 3.55% Senior Notes due June 15, 2025

PROSPECTUS SUPPLEMENT

June 4, 2015

Joint Book-Running Managers

BofA Merrill Lynch

J.P. Morgan

BNP PARIBAS

KeyBanc Capital Markets

Wells Fargo Securities

Co-Managers

Loop Capital Markets

PNC Capital Markets LLC

Ramirez & Co., Inc.
