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Filed Pursuant to Rule 424(b)(5)
Registration No. 333-224684

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Proposed maximum offering price	Amount of registration fee¹
Class C common stock, par value \$0.01 per share	\$99,309,116	\$0

¹No payment of registration fees is being made in connection with the filing of this prospectus supplement. This prospectus supplement relates to an aggregate of \$99,309,116 offering amount of shares of common stock of the registrant previously registered and unsold that are being carried forward pursuant to Rule 415(a)(6) under the Securities Act of 1933, as amended (the "Securities Act") and the related \$10,000 of filing fees paid in connection with such unsold shares of common stock under Registration Statement No. 333-205140 filed on June 22, 2015 and a prospectus supplement thereto dated August 9, 2016 filed pursuant to Rule 424(b). Pursuant to Rule 415(a)(6) under the Securities Act, the filing fees previously paid in connection with the unsold securities under Registration Statement No. 333-205140 and the prospectus supplement thereto dated August 9, 2016 filed pursuant to Rule 424(b) are carried forward and will continue to be applied to such unsold securities.



NRG Yield, Inc.

Continuation of 2016 At-The-Market Equity Offering Program

On August 9, 2016, we entered into an equity distribution agreement with Barclays Capital Inc., Credit Suisse Securities (USA) LLC, J.P. Morgan Securities LLC and RBC Capital Markets, LLC, as sales agents, relating to the offer and sale from time to time of shares of our Class C common stock, par value \$0.01 per share ("Class C common stock"). In accordance with the terms of the equity distribution agreement, we may offer and sell shares of our Class C common stock having a remaining aggregate offering price of up to \$99,309,116 from time to time pursuant to a continuous equity offering program. This prospectus supplement replaces and supersedes the prospectus supplement, dated August 9, 2016, which initially provided for us to offer and sell shares of our Class C common stock having an aggregate offering price of up to \$150,000,000. This prospectus supplement relates to the \$99,309,116 aggregate offering price of shares of Class C common stock that remain unsold under the prospectus supplement dated August 9, 2016.

Our Class C common stock is listed on the New York Stock Exchange ("NYSE") under the symbol "NYLD." The last reported sale price of our Class C common stock on the NYSE on May 3, 2018 was \$18.10 per share.

Sales of shares of our Class C common stock, if any, will be made by any method permitted by law and deemed to be an "at the market" offering as defined in Rule 415 under the Securities Act of 1933, as amended (the "Securities Act"), including by ordinary brokers' transactions through the facilities of the NYSE, to or through a market maker or directly on or through an electronic communications network, at market prices prevailing at the time of sale, at prices related to prevailing market prices or at negotiated prices, in block transactions or as otherwise agreed with the sales agents. Sales of shares of our Class C common stock will be made by only one sales agent on any given day. The sales agents are not required to sell any specific number or dollar amount of shares of Class C common stock, but each will use its commercially reasonable efforts, as our agent and subject to the terms of the equity distribution agreement, to sell the shares of Class C common stock offered, as instructed by us.

We will pay each sales agent an aggregate fee of up to 2.0% of the gross sales price of all shares of Class C common stock sold through such sales agent under the equity distribution agreement.

Under the terms of the equity distribution agreement, we may also sell shares of our Class C common stock to a sales agent as principal for its own account at a price agreed upon at the time of sale. If we sell shares of our Class C common stock to a sales agent as principal, we will enter into a separate terms agreement with such sales agent, and we will describe that agreement in a separate prospectus supplement or free writing prospectus.

Investing in our Class C common stock involves a high degree of risk. Please read "Risk Factors" beginning on page S-12 of this prospectus supplement. You should also consider the risk factors described in the documents incorporated by reference in this prospectus supplement and the accompanying prospectus.

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

Barclays Credit Suisse J.P. Morgan RBC Capital Markets

The date of this prospectus supplement is May 4, 2018

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We and the sales agents have not authorized anyone to provide any information other than that contained in this prospectus supplement and the accompanying prospectus or incorporated by reference in this prospectus supplement and the accompanying prospectus or in any free writing prospectus prepared by or on behalf of us to which we have referred you. We and the sales agents take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the sales agents are not making an offer of these securities in any jurisdiction where the offer is not permitted. You should not assume that the information contained in this prospectus supplement and the accompanying prospectus or incorporated by reference in this prospectus supplement and the accompanying prospectus is accurate as of any date other than the date of such document. Our business, financial condition, results of operations and prospects may have changed since those dates.

ABOUT THIS PROSPECTUS SUPPLEMENT AND THE ACCOMPANYING PROSPECTUS

This document consists of two parts. The first part is the prospectus supplement, which describes the specific terms of sales of our Class C common stock made under this equity offering program and also adds to and updates the information contained or incorporated by reference in the accompanying prospectus. The second part is the accompanying prospectus, which describes more general information regarding our securities, some of which does not apply to the sales made under this equity offering program. You should read both this prospectus supplement and the accompanying prospectus, together with additional information described under the heading "Where You Can Find More Information" and "Incorporation by Reference" in this prospectus supplement and "Where You Can Find More Information" in the accompanying prospectus in their entirety before making an investment decision.

If the information set forth in this prospectus supplement differs in any way from the information set forth in the accompanying prospectus or the information contained in any document incorporated by reference herein or therein, the information contained in the most recent document shall control. Unless the context otherwise requires or as otherwise expressly stated, references in this prospectus supplement to "the Company," "we," "us" and "our" and similar terms refer to NRG Yield, Inc., together with its consolidated subsidiaries, including NRG Yield LLC ("Yield LLC") and NRG Yield Operating LLC ("Yield Operating LLC"). References in this prospectus supplement to NRG Yield, Inc. refer to NRG Yield, Inc., and not any of its subsidiaries, unless the context otherwise requires. Unless the context otherwise requires or as otherwise indicated, references in this prospectus supplement to "NRG" refer to NRG Energy, Inc. (NYSE: NRG).

NOTICE TO INVESTORS

Several of our subsidiaries are "public utilities" (as defined in the Federal Power Act ("FPA")) subject to the jurisdiction of the U.S. Federal Energy Regulatory Commission ("FERC") because they own or operate FERC-jurisdictional facilities, including certain generation interconnection facilities and various "paper" facilities, such as wholesale power sales contracts and market-based rate tariffs. The FPA requires us either to obtain prior authorization from FERC prior to the transfer of an amount of our voting securities sufficient to convey direct or indirect "control" over any of our public utility subsidiaries or to qualify for a blanket authorization granted under FERC's regulations for certain types of transfers generally deemed by FERC not to convey direct or indirect "control." We intend to conduct this equity offering program in a manner consistent with FERC's guidance on "control" and the requirements for blanket authorizations granted under FERC's regulations. Our restated certificate of incorporation prohibits any person and any of its associate or affiliate companies in the aggregate, any "public utility" (as defined in the FPA) or any "holding company" (as defined in the Public Utility Holding Company Act of 2005 ("PUHCA")) from acquiring, through this equity offering program or in subsequent purchases other than secondary market transactions (as discussed under "Business—Regulatory Matters—FERC" and "Business—Regulatory Matters" in our Annual Report on Form 10-K for the year ended December 31, 2017 filed on March 1, 2018 (our "2017 Annual Report"), an amount of our voting securities sufficient to convey direct or indirect "control" over any of our public utility subsidiaries without the prior written consent of our board of directors. For the purposes of this equity offering program, "control" is defined to be a direct and/or indirect voting interest of 10% or more in any of the public utility subsidiaries of our direct subsidiary, Yield LLC. Because Yield LLC indirectly owns as much as 100% of the voting interests in certain of these public utility subsidiaries, "control" of such public utility subsidiaries would be deemed to be present if the sum of (i) the percentage ownership of an individual investor and any of its associate or affiliate companies in the aggregate of NRG's voting securities multiplied by the aggregate voting power of each class of our common stock held, directly or indirectly, by NRG, plus (ii) such investor's percentage ownership of each class of our common stock multiplied by the aggregate voting power of each such class not held, directly or indirectly, by NRG, exceeds 10%. "Control" could also be present, and pursuant to our restated

certificate of incorporation, prior written consent of our board of directors would be required, if the aggregate direct and/or indirect voting interest in us held by an individual investor and any of its associate or affiliate companies together with a separate investment in another public utility subsidiary of ours not wholly-owned by Yield LLC exceeded the 10% threshold. This prospectus supplement does not constitute an offer to sell any share of our Class C common stock to any person in violation of these or any other provisions of our restated certificate of incorporation.

TRADEMARKS AND TRADE NAMES

We own or have rights to various trademarks, service marks and trade names that we use in connection with the operation of our business. This prospectus supplement may also contain or incorporate by reference trademarks, service marks and trade names of NRG and third parties, which are the property of their respective owners. Solely for convenience, the trademarks, service marks and trade names contained or incorporated by reference into this prospectus supplement may appear without the ®, TM or SM symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks, service marks and trade names.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus contain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). The words "believes," "projects," "anticipates," "plans," "expects," "intends," "estimates" and similar expressions are intended to identify forward-looking statements. These forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause the Company's actual results, performance and achievements, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Forward-looking statements in this prospectus supplement, the accompanying prospectus and documents incorporated by reference into this prospectus supplement and the accompanying prospectus speak only as of the date of this prospectus supplement, the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. We undertake no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events, changed circumstances or otherwise. These forward-looking statements are subject to numerous risks and uncertainties, including, but not limited to:

- our ability to maintain and grow our quarterly dividend;
- Potential risks to us as a result of the NRG Transaction (as defined below);
- our ability to successfully identify, evaluate and consummate acquisitions from third parties;
- our ability to acquire assets from NRG;
- our ability to raise additional capital due to our indebtedness, corporate structure, market conditions or otherwise;
- Changes in law, including judicial decisions;
- Hazards customary to the power production industry and power generation operations such as fuel and electricity price volatility, unusual weather conditions (including wind and solar conditions), catastrophic weather-related or other damage to facilities, unscheduled generation outages, maintenance or repairs, unanticipated changes to fuel supply costs or availability due to higher demand, shortages, transportation problems or other developments, environmental

incidents, or electric transmission or gas pipeline system constraints and the possibility that we may not have adequate insurance to cover losses as a result of such hazards;

- our ability to operate our businesses efficiently, manage maintenance capital expenditures and costs effectively, and generate earnings and cash flows from our asset-based businesses in relation to our debt and other obligations;
- the willingness and ability of counterparties to our offtake agreements to fulfill their obligations under such agreements;
- our ability to enter into contracts to sell power and procure fuel on acceptable terms and prices as current offtake agreements expire;
- Government regulation, including compliance with regulatory requirements and changes in market rules, rates, tariffs and environmental laws;
- Operating and financial restrictions placed on us that are contained in the project-level debt facilities and other agreements of certain subsidiaries and project-level subsidiaries generally, in the NRG Yield Operating LLC amended and restated revolving credit facility, in the indentures governing the \$500 million aggregate principal amount of 5.375% unsecured senior notes due 2024, issued by NRG Yield Operating LLC and the \$350 million aggregate principal amount of 5.00% unsecured senior notes due 2026, issued by NRG Yield Operating LLC and in the indentures governing the Company's \$345 million aggregate principal amount of 3.50% convertible notes due 2019 and \$287.5 million aggregate principal amount of 3.25% Convertible Notes due 2020;
- Cyber terrorism and inadequate cybersecurity, or the occurrence of a catastrophic loss and the possibility that we may not have adequate insurance to cover losses resulting from such hazards or the inability of our insurers to provide coverage;
- our ability to engage in successful mergers and acquisitions activity; and
- our ability to borrow additional funds and access capital markets, as well as our substantial indebtedness and the possibility that we may incur additional indebtedness going forward.

The foregoing review of factors that could cause our actual results to differ materially from those contemplated in any forward-looking statements included in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus should not be construed as exhaustive.

SUMMARY

This summary highlights information contained elsewhere in this prospectus supplement and the accompanying prospectus, or incorporated by reference in this prospectus supplement and the accompanying prospectus. As a result, this summary does not contain all of the information that may be important to you or that you should consider before investing in our Class C common stock. You should carefully read this entire prospectus supplement and the accompanying prospectus, together with all documents incorporated by reference herein and therein, which are described under "Where You Can Find More Information" and "Incorporation by Reference" in this prospectus supplement and under "Where You Can Find More Information" in the accompanying prospectus.

About NRG Yield, Inc.

We are a dividend growth-oriented company that has historically served as the primary vehicle through which NRG Energy, Inc. (NYSE: NRG) ("NRG") owns, operates and acquires contracted renewable and conventional generation and thermal infrastructure assets. NRG, through its holdings of NRG Yield, Inc.'s Class B and Class D common stock, has a 55.1% voting interest in NRG Yield, Inc. as of March 31, 2018. On February 6, 2018, Global Infrastructure Partners ("GIP") entered into a purchase and sale agreement with NRG (the "NRG Transaction") for the acquisition of NRG's full ownership interest in NRG Yield, Inc. and NRG's renewable energy development and operations platform. The aggregate purchase price to be paid by GIP to NRG under the purchase and sale agreement is approximately \$1.375 billion, subject to certain adjustments. The NRG Transaction is subject to certain closing conditions, including customary legal and regulatory approvals. We expect the NRG Transaction to close in the second half of 2018.

In connection with the NRG Transaction, we entered into a consent and indemnity agreement (the "Consent and Indemnity Agreement") with NRG and GIP setting forth key terms and conditions of our consent to the NRG Transaction. Key provisions of the Consent and Indemnity Agreement include:

Minimized impact to cash available for distribution ("CAFD") from potential change in control costs—No more than \$10 million in reduced annual CAFD on a recurring basis that would result from changes in our cost structure or any impact from various consents.

Enhanced Right of First Offer ("ROFO") pipeline—Upon closing of the NRG Transaction, we will enter into a new right of first offer agreement with GIP that adds 550 MW to the current pipeline through the operational 150 MW Langford Wind project and the 400 MW Mesquite Star Wind project which is under development. The ROFO Agreement with NRG will be amended to remove the Ivanpah solar facility.

Financial cooperation and support—GIP has arranged a \$1.5 billion backstop credit facility to manage any change of control costs associated with our corporate debt. GIP has also committed to provide up to \$400 million in financial support, if necessary, for our purchase of the Carlsbad Energy Center.

Voting and Governance Agreement—As part of the NRG Transaction, the parties have agreed to enter into a voting and governance agreement, which would provide that:

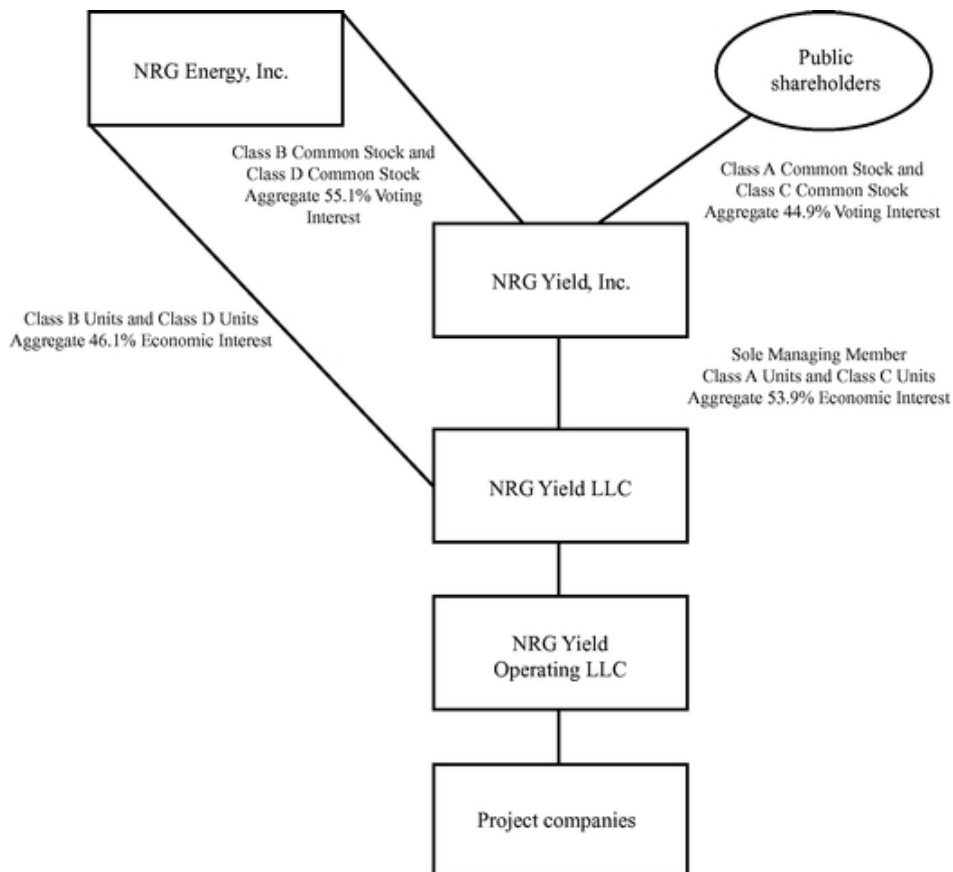
- our Chief Executive Officer will at all times be a full-time NRG Yield, Inc. employee appointed by the Board of Directors of NRG Yield, Inc. (the "Board");
- the parties thereto will use their commercially reasonable efforts to submit to our stockholders at our 2019 Annual Meeting of Stockholders a charter amendment to classify the Board into two classes (with the independent directors and directors designated by an affiliate of GIP allocated across the two classes); and

- the Board will be expanded to nine members at the closing of the NRG Transaction, comprised at that date of five directors designated by GIP, three independent directors and our Chief Executive Officer.

We believe we are well positioned to be a premier company for investors seeking stable and growing dividend income from a diversified portfolio of lower-risk assets. We own a diversified portfolio of contracted renewable and conventional generation and thermal infrastructure assets in the U.S. Our contracted generation portfolio collectively represents 5,118 net Megawatts ("MWs") as of March 31, 2018. Nearly all of these assets sell substantially all of their output pursuant to long-term offtake agreements with creditworthy counterparties. The weighted average remaining contract duration of these offtake agreements was approximately 15 years as of March 31, 2018 based on CAFD. We also own thermal infrastructure assets with an aggregate steam and chilled water capacity of 1,319 net Megawatts Thermal ("MWt") and electric generation capacity of 123 net MWs. These thermal infrastructure assets provide steam, hot and/or chilled water, and, in some instances, electricity to commercial businesses, universities, hospitals and governmental units in multiple locations, principally through long-term contracts or pursuant to rates regulated by state utility commissions.

Organizational Structure

The following organizational chart summarizes certain relevant aspects of our organizational structure as of March 31, 2018:



Agreements with NRG

In connection with the initial public offering of NRG Yield, Inc., Yield LLC and Yield Operating LLC entered into a Management Services Agreement and Right of First Offer Agreement, as amended from time to time, with NRG. Those agreements were entered into subsequent to negotiations between affiliated parties and, consequently, may not be as favorable to us as they might have been if we had negotiated them with an unaffiliated third party. For a more comprehensive discussion of these agreements and the other agreements that we have entered into with NRG and certain of its affiliates, please read "Governance of the Company," "Certain Relationships and Related Person Transactions" and "Executive Compensation" in our Proxy Statement for our 2018 Annual Meeting of Stockholders filed with the Securities and Exchange Commission ("SEC") on March 15, 2018 and incorporated by reference herein (our "2018 Proxy Statement").

On February 6, 2018, GIP entered into a purchase and sale agreement with NRG for the acquisition of NRG's full ownership interest in NRG Yield, Inc. and NRG's renewable energy development and operations platform. The aggregate purchase price to be paid by GIP to NRG under the purchase and sale agreement is approximately \$1.375 billion, subject to certain adjustments. The NRG Transaction is subject to certain closing conditions, including customary legal and regulatory approvals. We expect the NRG Transaction to close in the second half of 2018.

Summary of Risk Factors

You should read the "Risk Factors" sections found in this prospectus supplement, in our 2017 Annual Report and in other documents that we subsequently file with the SEC, all of which are incorporated by reference in this prospectus supplement and the accompanying prospectus, for a discussion of certain of the factors to consider carefully before deciding to purchase any shares of Class C common stock.

Corporate Information

Our principal executive offices are located at NRG Yield, Inc., 804 Carnegie Center, Princeton, New Jersey 08540. Our telephone number is (609) 524-4500. Our website is located at <http://www.nrgyield.com>. We make our periodic reports and other information filed with or furnished to the SEC pursuant to Section 13(a) or 15(d) of the Exchange Act, available free of charge, through our website, as soon as reasonably practicable after those reports and other information are electronically filed with or furnished to the SEC. Information on our website or any other website is not incorporated by reference into this prospectus supplement and does not constitute a part of this prospectus supplement. The SEC maintains a website at <http://www.sec.gov> that contains reports and other information regarding issuers that file electronically with the SEC.

THE OFFERING

This prospectus supplement replaces and supersedes the prospectus supplement dated August 9, 2016, which initially provided for us to offer and sell shares of our Class C common stock having an aggregate offering price of up to \$150,000,000. This prospectus supplement relates to the \$99,309,116 aggregate offering price of shares of Class C common stock that remain unsold under the prospectus supplement dated August 9, 2016.

Class C common stock offered	In accordance with the terms of the equity distribution agreement, we may offer and sell shares of our Class C common stock having a remaining aggregate offering price of up to \$99,309,116 from time to time pursuant to a continuous equity offering program.
Manner of offering	"At-the-market" offering that may be made from time to time through the sales agents or to a sales agent as principal for its own account at a price agreed upon at the time of sale. Please read "Plan of Distribution."
Use of proceeds	<p>We intend to use the net proceeds from the sale of the Class C common stock for general corporate purposes, including the repayment of indebtedness and the funding of acquisitions and investments. Please read "Use of Proceeds."</p> <p>Affiliates of the sales agents are lenders under our revolving credit facility. To the extent we use proceeds from the offering to repay any indebtedness under our revolving credit facility, such affiliates will receive proceeds from this offering. Please read "Plan of Distribution."</p>

Voting rights

Each share of our Class A common stock, par value \$0.01 per share ("Class A common stock"), and Class B common stock, par value \$0.01 per share ("Class B common stock"), entitles the holder thereof to one vote on all matters to be voted on by stockholders generally. Each share of our Class C common stock and Class D common stock, par value \$0.01 per share ("Class D common stock"), entitles the holder thereof to 1/100th of one vote on all matters to be voted on by stockholders generally. Holders of shares of each class of our common stock vote together as a single class on all matters presented to our stockholders for their vote or approval, except as otherwise required by applicable law or the listing requirements of any exchange on which shares of our common stock are listed. Except in respect of matters relating to the election and removal of directors on our board of directors and as otherwise provided in our restated certificate of incorporation or required by law, all matters to be voted on by holders of shares of each class of our common stock must be approved by a majority, on a combined basis, of the voting power of such shares present in person or by proxy at the meeting and entitled to vote on the subject matter. In the case of the election of directors, all matters to be voted on by our stockholders must be approved by a plurality of the voting power entitled to be cast by all shares of our common stock on a combined basis. For a complete description of our capital stock, please read "Description of Capital Stock" in the accompanying prospectus. The foregoing description of the voting rights associated with our capital stock supersedes the description of the voting rights contained in the accompanying prospectus.

Economic interest

Upon completion of this equity offering program, NRG, or its successor, GIP, if the NRG Transaction is completed, will own shares of Class B common stock and Class D common stock representing approximately 55.01% of the combined voting power of all of our outstanding common stock (assuming 5,486,691 shares of Class C common stock are sold in this equity offering program based upon the last reported sale price included on the cover of this prospectus supplement). As a result, NRG or its successor GIP, if the NRG Transaction is completed, will continue to be able to exercise control over matters requiring the approval of our stockholders.

Upon completion of this equity offering program, the holders of our Class A common stock and Class C common stock in the aggregate will own an approximate 55.30% economic interest in our business through our ownership of Class A units and Class C units of Yield LLC and NRG will own an approximate 44.70% economic interest in our business through its ownership of Class B units and Class D units of Yield LLC (in each case, assuming 5,486,691 shares of Class C common stock are sold in this equity offering program based upon the last reported sale price included on the cover of this prospectus supplement).

Exchange and registration rights

Each Class B unit of Yield LLC is exchangeable for a share of our Class A common stock, and each Class D unit of Yield LLC is exchangeable for a share of our Class C common stock, subject to equitable adjustments for stock splits, stock dividends and reclassifications in accordance with the terms of the Amended and Restated Exchange Agreement, dated as of May 14, 2015, by and among NRG Yield, Inc., Yield LLC and NRG.

When NRG or a permitted transferee exchanges a Class B unit of Yield LLC for a share of our Class A common stock, we will automatically redeem and cancel a corresponding share of our Class B common stock and the Class B unit will automatically convert into a Class A unit of Yield LLC issued to us. When NRG or a permitted transferee exchanges a Class D unit of Yield LLC for a share of our Class C common stock, we will automatically redeem and cancel a corresponding share of our Class D common stock and the Class D unit will automatically convert into a Class C unit of Yield LLC issued to us.

Pursuant to a registration rights agreement that we have entered into with NRG, we agreed to file a registration statement for the sale of the shares of our Class A common stock or Class C common stock that are issuable upon exchange of Class B units or Class D units, respectively, of Yield LLC upon request and cause that registration statement to be declared effective by the SEC as soon as practicable thereafter. For more information regarding these agreements, please read "Certain Relationships and Related Person Transactions—Exchange Agreement" and "Certain Relationships and Related Person Transactions—Registration Rights Agreement" in our 2018 Proxy Statement.

Cash dividends	<p>We expect to pay a quarterly dividend on or about the 75th day following the expiration of each fiscal quarter to holders of our Class A common stock and Class C common stock of record on or about the 60th day following the last day of such fiscal quarter. However, we do not have a legal obligation to declare or pay dividends at a specific quarterly dividend level or at all and our ability to pay the regular quarterly dividend is subject to various restrictions and other factors.</p> <p>On April 24, 2018, we declared a quarterly dividend of \$0.309 per share (\$1.24 per share annualized) on our outstanding Class A common stock and Class C common stock, payable on June 15, 2018 to holders of record as of June 1, 2018.</p>
Material federal income tax considerations for non-U.S. holders	<p>For a discussion of the material federal income tax consequences that may be relevant to prospective investors who are non-U.S. holders, please read "Material U.S. Federal Income Tax Considerations for Non-U.S. Holders of our Class C Common Stock."</p>
Exchange listing	<p>Our Class C common stock is traded on the NYSE under the symbol "NYLD."</p>

RISK FACTORS

An investment in our Class C common stock involves a high degree of risk. You should carefully read and consider the risk factors below, as well as the "Risk Factors" section in our 2017 Annual Report and in other documents that we subsequently file with the SEC, all of which are incorporated by reference in this prospectus supplement and the accompanying prospectus, for a discussion of certain of the factors to consider carefully before deciding to purchase any Class C common stock. You should also read all other information contained in or incorporated by reference in this prospectus supplement and the accompanying prospectus before deciding to invest in our Class C common stock. If any of the risks actually occur, they may materially harm our business, financial condition, operating results or cash flow. As a result, the market price of our Class C common stock could decline, and you could lose all or part of your investment. Additional risks and uncertainties that are not yet identified or that we think are immaterial may also materially harm our business, operating results, financial condition or cash flow and could result in a complete or partial loss of your investment.

Risks Related to the Offering

Market volatility may affect the price of our Class C common stock and the value of your investment.

Our Class C common stock was distributed to holders of our Class A common stock through a stock split on May 14, 2015 and began trading on the NYSE under the symbol "NYLD" on May 15, 2015. The trading price of our Class C common stock has experienced price volatility in the period since its issuance and may continue to be volatile. For example, from May 15, 2015 through May 3, 2018, the closing price of our Class C common stock ranged from \$10.89 per share to \$27.11 per share.

The market price of our Class C common stock may fluctuate significantly in response to a number of factors, most of which we cannot predict or control, including general market and economic conditions, disruptions, downgrades, credit events and perceived problems in the credit markets; actual or anticipated variations in our quarterly operating results or dividends; changes in our investments or asset composition; write-downs or perceived credit or liquidity issues affecting our assets; market perception of NRG or the proposed NRG Transaction, our business and our assets; our level of indebtedness and/or adverse market reaction to any indebtedness we incur in the future; our ability to raise capital on favorable terms or at all; loss of any major funding source; the termination of the Management Services Agreement with NRG or additions or departures of our executive officers or NRG's key personnel; changes in market valuations of similar power generation companies; and speculation in the press or investment community regarding us, NRG or the proposed NRG Transaction.

Securities markets in general have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. Any broad market fluctuations may adversely affect the trading price of our Class C common stock.

You may experience dilution of your ownership interest due to the future issuance of additional shares of our Class C common stock.

We are in a capital intensive business, and may not have sufficient funds to finance the growth of our business, future acquisitions or to support our projected capital expenditures. As a result, we may require additional funds from further equity or debt financings, including tax equity financing transactions or sales of preferred shares or convertible debt to complete future acquisitions, expansions and capital expenditures and pay the general and administrative costs of our business. In the future, we may issue our previously authorized and unissued securities, resulting in the dilution of the ownership interests of purchasers of our Class C common stock offered hereby.

Under our restated certificate of incorporation, we are authorized to issue 10,000,000 shares of preferred stock, 500,000,000 shares of Class A common stock, 500,000,000 shares of Class B common stock, 1,000,000,000 shares of Class C common stock and 1,000,000,000 shares of Class D common stock. The potential issuance of additional shares of common stock or preferred stock or convertible debt may create downward pressure on the trading price of our Class C common stock. We may also issue additional shares of our Class C common stock or other securities that are convertible into or exercisable for our Class C common stock in future public offerings or private placements for capital raising purposes or for other business purposes, potentially at an offering price, conversion price or exercise price that is below the offering price for our Class C common stock in this equity offering program.

Our management will have broad discretion over the use of proceeds from any sales made under this equity offering program and may not use the proceeds effectively.

Our management will have broad discretion as to the application of the net proceeds from any sales made under this equity offering program and could spend the proceeds in a variety of ways that may ultimately fail to improve our operating results or enhance the value of our Class C common stock. Our failure to apply these funds effectively could have a negative effect on our business and cause the price of our Class C common stock to decline.

USE OF PROCEEDS

We intend to use the net proceeds from the sale of the Class C common stock for general corporate purposes, including the repayment of indebtedness and the funding of acquisitions and investments. We may invest funds not required immediately for such purposes in marketable securities and short-term investments.

Affiliates of the sales agents are lenders under our revolving credit facility. To the extent we use proceeds from the offering to repay any indebtedness under our revolving credit facility, such affiliates will receive proceeds from this offering. Please read "Plan of Distribution."

MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS OF OUR CLASS C COMMON STOCK

The following is a summary of the material United States federal income and estate tax consequences to non-U.S. holders, defined below, of the purchase, ownership and disposition of shares of our Class C common stock as of the date of this prospectus supplement. Except where noted, this summary deals only with shares of our Class C common stock purchased in this equity offering program that are held as capital assets by a non-U.S. holder.

Except as modified for estate tax purposes, a "non-U.S. holder" means a beneficial owner of shares of our Class C common stock that is not for United States federal income tax purposes any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation (or any other entity treated as a corporation for United States federal income tax purposes) created or organized in or under the laws of the United States, any state thereof or the District of Columbia;
- any entity or arrangement treated as a partnership for United States federal income tax purposes;
- an estate the income of which is subject to United States federal income taxation regardless of its source; or

- a trust if it (1) is subject to the primary supervision of a court within the United States and one or more United States persons have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable United States Treasury regulations to be treated as a United States person.

This summary is based upon provisions of the Code, applicable United States Treasury regulations, rulings and judicial decisions, all as of the date of the prospectus supplement. Those authorities are subject to different interpretations and may be changed, perhaps retroactively, so as to result in United States federal income and estate tax consequences different from those summarized below. This summary does not address all aspects of United States federal income and estate taxes and does not deal with foreign, state, local, alternative minimum or other tax considerations that may be relevant to non-U.S. holders in light of their particular circumstances. In addition, this summary does not represent a detailed description of the United States federal income and estate tax consequences applicable to you if you are subject to special treatment under the United States federal income tax laws (including, without limitation, if you are a United States expatriate, financial institution, insurance company, tax-exempt organization, dealer in securities, broker, "controlled foreign corporation," "passive foreign investment company," a partnership or other pass-through entity for United States federal income tax purposes (or an investor in such a pass-through entity), a person who acquired shares of our Class C common stock as compensation or otherwise in connection with the performance of services, a person subject to special tax accounting rules as a result of any item of gross income with respect to the Class C common stock being taken into account in an applicable financial statement, or a person who has acquired shares of our Class C common stock as part of a straddle, hedge, conversion transaction or other integrated investment). We cannot assure you that a change in law will not alter significantly the tax considerations that we describe in this summary.

We have not and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance that the IRS will not take positions concerning the tax consequences of the purchase, ownership or disposition of shares of our Class C common stock that are different from those discussed below.

If any entity or arrangement treated as a partnership for United States federal income tax purposes holds shares of our Class C common stock, the tax treatment of a partner will generally depend upon the status of the partner and the activities of the partnership. If you are a partner of a partnership holding shares of our Class C common stock, you should consult your tax advisors.

If you are considering the purchase of shares of our Class C common stock, you should consult your own tax advisors concerning the particular United States federal income, estate and gift tax consequences to you of the ownership and disposition of the shares of our Class C common stock, as well as the consequences to you arising under the laws of any other applicable taxing jurisdiction in light of your particular circumstances.

Dividends

We intend to pay cash distributions on shares of our Class C common stock for the foreseeable future. Distributions on our Class C common stock will constitute dividends for U.S. tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. To the extent those distributions exceed both our current and our accumulated earnings and profits, they will constitute a return of capital and will first reduce your basis in our Class C common stock (determined on a share by share basis), but not below zero, and then to the extent of any excess over basis, will be treated as gain from the sale of stock.

The gross amount of dividends paid to a non-U.S. holder generally will be subject to withholding of United States federal income tax at a 30% rate, or such lower rate as may be specified by an applicable income tax treaty. However, dividends that are effectively connected with the conduct of a

trade or business by the non-U.S. holder within the United States generally are not subject to the withholding tax, provided certain certification and disclosure requirements are satisfied. Instead, such dividends are subject to United States federal income tax on a net income basis generally in the same manner as if the non-U.S. holder were a United States person as defined under the Code (unless an applicable income tax treaty provides otherwise). To obtain the exemption from withholding on effectively connected income, a non-U.S. holder must provide us, our paying agent or other applicable withholding agent with a properly executed IRS Form W-8ECI (or successor form) prior to the payment of the dividend. A corporate non-U.S. holder may be subject to an additional "branch profits tax" at a 30% rate (or such lower rate as may be specified by an applicable income tax treaty) on its effectively connected earnings and profits attributable to such dividends.

A non-U.S. holder of shares of our Class C common stock who wishes to claim the benefit of an applicable treaty rate and avoid backup withholding, as discussed below, for dividends will be required (a) to complete IRS Form W-8BEN or Form W-8BEN-E (or other applicable form) and certify under penalty of perjury that such holder is not a United States person as defined under the Code and is eligible for treaty benefits or (b) if shares of our Class C common stock are held through certain foreign intermediaries, to satisfy the relevant certification requirements of applicable United States Treasury regulations. A non-U.S. holder who provides us, our paying agent or other applicable withholding agent with an IRS Form W-8BEN, Form W-8BEN-E, Form W-8ECI or other form must update the form or submit a new form, as applicable, if there is a change in circumstances that makes any information on such form incorrect. Special certification and other requirements apply to certain non-U.S. holders that are pass-through entities rather than corporations or individuals.

It is possible that a distribution made to a non-U.S. holder may be subject to over-withholding because, for example, at the time of the distribution we or the relevant withholding agent may not be able to determine how much of the distribution constitutes dividends or the proper documentation establishing the benefits of any applicable treaty has not been properly supplied. If there is any over-withholding on distributions made to a non-U.S. holder, such non-U.S. holder may obtain a refund of the over-withheld amount by timely filing an appropriate claim for refund with the IRS. Non-U.S. holders should consult their tax advisors regarding the applicable withholding tax rules and the possibility of obtaining a refund of any over-withheld amounts.

Gain on Disposition of Shares of Our Class C Common Stock

Any gain realized by a non-U.S. holder on the disposition of shares of our Class C common stock generally will not be subject to United States federal income tax unless:

- the gain is effectively connected with a trade or business of the non-U.S. holder in the United States;
- the non-U.S. holder is an individual who is present in the United States for 183 days or more in the taxable year of that disposition and certain other conditions are met; or
- our Class C common stock constitutes a U.S. real property interest by reason of our status as a "United States real property holding corporation" (a "USRPHC") for United States federal income tax purposes at any time during the shorter of the five-year period ending on the date of the disposition or the period that the non-U.S. holder held shares of our Class C common stock.

In the case of a non-U.S. holder described in the first bullet point above, any gain will be subject to United States federal income tax on a net income basis generally in the same manner as if the non-U.S. holder were a United States person as defined under the Code (unless an applicable income tax treaty provides otherwise), and a non-U.S. holder that is a foreign corporation may be subject to the branch profits tax equal to 30% of its effectively connected earnings and profits attributable to such gain (or at such lower rate as may be specified by an applicable income tax treaty). In the case of a

non-U.S. holder described in the second bullet point above, except as otherwise provided by an applicable income tax treaty, any gain, which may be offset by certain United States source capital losses, will be subject to a 30% tax even though the individual is not considered a resident of the United States under the Code.

We believe that we are not currently and will not become a USRPHC. However, because the determination of whether we are a USRPHC depends on the fair market value of our U.S. real property relative to the fair market value of our other business assets and because the definition of U.S. real property is not entirely clear, there can be no assurance that we are not a USRPHC now or will not become one in the future. Even if we become a USRPHC, however, as long as our Class C common stock is regularly traded on an established securities market, as to which there can be no assurance, such Class C common stock will be treated as a U.S. real property interest only if you actually or constructively hold more than five percent of such regularly traded Class C common stock at any time during the applicable period described above.

Information Reporting and Backup Withholding

We must report annually to the IRS and to you the amount of dividends paid to you and the amount of tax, if any, withheld with respect to such dividends. The IRS may make this information available to the tax authorities in the country in which you are resident.

In addition, you may be subject to information reporting requirements and backup withholding tax with respect to dividends paid on, and the proceeds of disposition of, shares of our Class C common stock, unless, generally, you certify under penalties of perjury (usually on IRS Form W-8BEN or Form W-8BEN-E) that you are not a U.S. person or you otherwise establish an exemption. Additional rules relating to information reporting requirements and backup withholding tax with respect to payments of the proceeds from the disposition of shares of our Class C common stock are as follows:

- If the proceeds are paid to or through the U.S. office of a broker, the proceeds generally will be subject to backup withholding tax and information reporting, unless you certify under penalties of perjury (usually on IRS Form W-8BEN or Form W-8BEN-E) that you are not a U.S. person or you otherwise establish an exemption.
- If the proceeds are paid to or through a non-U.S. office of a broker that is not a U.S. person and is not a foreign person with certain specified U.S. connections (a "U.S.-related person"), information reporting and backup withholding tax generally will not apply.
- If the proceeds are paid to or through a non-U.S. office of a broker that is a U.S. person or a U.S.-related person, the proceeds generally will be subject to information reporting (but not to backup withholding tax), unless you certify under penalties of perjury (usually on IRS Form W-8BEN or Form W-8BEN-E) that you are not a U.S. person or you otherwise establish an exemption.

Any amounts withheld under the backup withholding tax rules may be allowed as a refund or a credit against your U.S. federal income tax liability, provided the required information is timely furnished by you to the IRS.

Foreign Accounts

The Foreign Account Tax Compliance Act (the "FATCA"), generally imposes a U.S. federal withholding tax of 30% on dividends on and the gross proceeds from the sale or other disposition of our Class C common stock, paid to a "foreign financial institution" (as specifically defined under these rules), unless such institution enters into an agreement with the U.S. government to, among other things, withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding the U.S. account holders of such institution (which includes certain equity and

debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners) or otherwise establishes an exemption. FATCA also generally imposes a U.S. federal withholding tax of 30% on dividends on and the gross proceeds from the sale or other disposition of our Class C common stock paid to a "non-financial foreign entity" (as specifically defined for purposes of these rules) unless such entity provides the withholding agent with a certification identifying certain substantial direct and indirect U.S. owners of the entity, certifies that there are none or otherwise establishes an exemption. The withholding provisions under FATCA generally apply to dividends on our Class C common stock and will apply with respect to the gross proceeds from a sale or other disposition of our Class C common stock occurring after December 31, 2018. Under certain circumstances, a non-United States holder might be eligible for refunds or credits of such taxes. An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this paragraph. Prospective investors are encouraged to consult with their own tax advisors regarding the possible implications of this legislation on their investment in our Class C common stock.

Federal Estate Tax

Shares of our Class C common stock that are owned (or treated as owned) by an individual who is not a citizen or resident of the United States (as specially defined for United States federal estate tax purposes) at the time of death will be included in such individual's gross estate for United States federal estate tax purposes, unless an applicable estate or other tax treaty provides otherwise, and, therefore, may be subject to United States federal estate tax.

PLAN OF DISTRIBUTION

This prospectus supplement replaces and supersedes the prospectus supplement dated August 9, 2016, which initially provided for us to offer and sell shares of our Class C common stock having an aggregate offering price of up to \$150,000,000. This prospectus supplement relates to the \$99,309,116 aggregate offering price of shares of Class C common stock that remain unsold under the prospectus supplement dated August 9, 2016. In accordance with the terms of the equity distribution agreement, we may offer and sell shares of our Class C common stock having a remaining aggregate offering price of up to \$99,309,116 from time to time pursuant to a continuous equity offering program. We have filed the equity distribution agreement as an exhibit to a Current Report on Form 8-K filed with the SEC on August 9, 2016, which is incorporated by reference in this prospectus supplement.

The sales, if any, of shares of our Class C common stock made under the equity distribution agreement will be made by any method permitted that is deemed an "at the market offering" as defined in Rule 415 under the Securities Act, including ordinary brokers' transactions on the NYSE, to or through a market maker or directly on or through an electronic communications network, at market prices prevailing at the time of sale, at prices related to prevailing market prices or at negotiated prices, in block transactions, or as otherwise agreed between us and the sales agents. The sales agents will not engage in any transactions that stabilize the price of our Class C common stock.

Under the terms of the equity distribution agreement, we may also sell shares of our Class C common stock to one or more of the sales agents as principal for its own account at a price agreed upon at the time of sale. If we sell shares of our Class C common stock to one or more of the sales agents as principal, we will enter into a separate terms agreement with such sales agents and will describe that agreement in a separate prospectus supplement or free writing prospectus.

Subject to the terms and conditions of the equity distribution agreement, the sales agents will use their commercially reasonable efforts consistent with their normal trading and sales practices to sell all of the designated shares of Class C common stock. We may instruct the sales agents not to sell any shares of our Class C common stock if the sales cannot be effected at or above the price designated by

us. We or any of the sales agents may suspend the equity offering program at any time by notifying the other parties.

Each sales agent will provide to us written confirmation following the close of trading on the NYSE each day on which shares of our Class C common stock are sold under the equity distribution agreement. Each confirmation will include the number of shares of Class C common stock sold on that day, the gross sales proceeds and the net proceeds to us (after regulatory transaction fees, if any, but before other expenses). We will report at least quarterly the number of shares of our Class C common stock sold through the sales agents under the equity distribution agreement, the net proceeds to us (before expenses) and the commissions of the sales agents in connection with the sales of the shares of Class C common stock.

We will pay each sales agent a commission rate of up to 2.0% of the gross sales price per share of our Class C common stock sold through it as our agent under the equity distribution agreement. Pursuant to the equity distribution agreement, we have agreed to reimburse the sales agents for certain of their expenses.

Settlement for sales of shares of our Class C common stock will occur on the second business day following the date on which any sales are made in return for payment of the net proceeds to us. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

The equity offering program will terminate upon the earlier of (1) the sale of all shares of Class C common stock subject to the equity distribution agreement or (2) the termination of the equity distribution agreement by us or by each of the sales agents.

In connection with the sale of the shares of our Class C common stock on our behalf, each of the sales agents may be deemed to be an "underwriter" within the meaning of the Securities Act and the compensation paid to the sales agents may be deemed to be underwriting commissions or discounts. We have agreed to provide indemnification and contribution to the sales agents against certain liabilities, including civil liabilities under the Securities Act.

The sales agents and their respective affiliates are full service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. The sales agents and their affiliates have provided in the past, to us and our affiliates, and may provide from time to time in the future certain commercial banking, financial advisory, investment banking and other services in the ordinary course of their businesses, for which they have received and may continue to receive customary fees and commissions. JPMorgan Chase Bank, N.A., an affiliate of J.P. Morgan Securities LLC, is the administrative agent, a letter of credit issuer and lender under our revolving credit facility. Affiliates of Credit Suisse Securities (USA) LLC, Barclays Capital Inc. and RBC Capital Markets, LLC are lenders under our revolving credit facility. To the extent we use proceeds from the offering to repay any indebtedness under our revolving credit facility, such sales agents will receive a portion of the proceeds from this offering.

In addition, from time to time, certain of the sales agents and their affiliates may effect transactions for their own account or the account of customers, and hold on behalf of themselves or their customers, long or short positions in our debt or equity securities or loans, and for persons or entities who have relationships with us, and may do so in the future. The sales agents and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

In the ordinary course of their various business activities, the sales agents and their respective affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively trade securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities and/or instruments of the issuer (directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with the issuer.

LEGAL MATTERS

The validity of the shares of Class C common stock being sold in any sales made under the equity distribution agreement will be passed upon for us by Ballard Spahr LLP, Philadelphia, Pennsylvania. Certain U.S. legal matters relating to any such sales will be passed upon for the sales agents by Latham & Watkins, LLP, New York, New York. Ballard Spahr LLP has from time to time represented and may continue to represent NRG and some of its affiliates in connection with various legal matters.

EXPERTS

The consolidated financial statements and schedule of NRG Yield, Inc. as of December 31, 2017 and 2016, and for each of the years in the three-year period ended December 31, 2017, and management's assessment of the effectiveness of internal control over financial reporting as of December 31, 2017 have been incorporated by reference herein and in the accompanying prospectus, in reliance upon the reports of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus supplement and the accompanying prospectus is a part of a Registration Statement on Form S-3 under the Securities Act (File No. 333-224684), which we have filed with the SEC to register the shares of Class C common stock offered hereby. This prospectus supplement and the accompanying prospectus do not contain all of the information in the registration statement and its exhibits. For further information regarding us and our securities, please see the registration statement and our other filings with the SEC, including our annual, quarterly and current reports and proxy statements, which you may read and copy at the Public Reference Room maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information about the Public Reference Room by calling the SEC at 1-800-SEC-0330.

Our SEC filings are also available to the public on the SEC's website at <http://www.sec.gov> and on our website at <http://www.nrgyield.com>. Information contained on our website is not a part of this prospectus supplement, the accompanying prospectus or any related free writing prospectus.

INCORPORATION BY REFERENCE

The SEC allows us to "incorporate by reference" the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus supplement and the accompanying prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and all documents subsequently filed with the SEC pursuant to Section 13(a), 13(c), 14, or 15(d) of the Exchange Act prior to the termination of the equity offering program under this prospectus supplement:

- Our Annual Report on Form 10-K for the year ended December 31, 2017, filed on March 1, 2018;

- The information specifically incorporated by reference into our Annual Report on Form 10-K from our definitive proxy statement on Schedule 14A, filed on March 15, 2018;
- Our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2018, filed on May 3, 2018;
- Our Current Reports on Form 8-K filed on February 7, 2018, February 12, 2018, March 22, 2018, April 2, 2018, April 5, 2018 and April 27, 2018; and
- the description of our Class C common stock, par value \$0.01 per share, contained in our Registration Statement on Form 8-A/A filed on May 8, 2015, which amended our Registration Statement on Form 8-A filed on July 12, 2013 (File No. 001-36002), including any amendment or report filed for the purpose of updating, changing or otherwise modifying such description.

Notwithstanding the foregoing, except as specifically noted above, we are not incorporating by reference any documents, portions of documents, exhibits or other information that is deemed to have been furnished to, rather than filed with, the SEC. We will provide, without charge, to each person to whom a copy of this prospectus supplement and accompanying prospectus has been delivered, upon written or oral request of such person, a copy of any or all of the documents incorporated by reference herein (other than certain exhibits to such documents not specifically incorporated by reference). Requests for such copies should be directed to:

Investor Relations
NRG Yield, Inc.
804 Carnegie Center
Princeton, New Jersey 08540
(609)-524-4500



NRG Yield, Inc.

Class A Common Stock Class C Common Stock Debt Securities Preferred Stock

NRG Yield, Inc., from time to time, may offer to sell Class A common stock, Class C common stock, senior or subordinated debt securities, and preferred stock. The debt securities and preferred stock may be convertible into or exercisable or exchangeable for our Class A common stock, our Class C common stock, our preferred stock, our other securities or the debt or equity securities of one or more other entities. This prospectus describes some of the general terms that may apply to these securities. The specific terms of any securities to be offered will be described in a supplement to this prospectus. The prospectus supplements may also add, update, or change information contained in this prospectus.

We may offer and sell these securities to or through one or more underwriters, dealers and agents, or directly to purchasers, or through a combination of these methods, on a continuous or delayed basis.

Our Class A common stock is traded on the New York Stock Exchange under the symbol "NYLD.A." Our Class C common stock is traded on the New York Stock Exchange under the symbol "NYLD."

Investing in our securities involves risks. You should carefully consider the risks described under "Risk Factors" on page 2 of this prospectus, as well as the other information contained or incorporated by reference in this prospectus and the related prospectus supplement, before making a decision to invest in our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is May 4, 2018.

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ABOUT THIS PROSPECTUS

This prospectus is a part of a registration statement that we filed with the Securities and Exchange Commission (the "SEC") utilizing a "shelf" registration process. Under this shelf registration process, we may sell any combination of the securities described in this prospectus in one or more offerings from time to time. This prospectus provides you with a general description of the securities we may offer. Each time we sell securities under this shelf registration, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. Therefore, if there is any inconsistency between the information in this prospectus and the prospectus supplement, you should rely on the information in the prospectus supplement. You should read both this prospectus and any prospectus supplement, together with additional information described under the heading "Where You Can Find More Information."

We have not authorized any dealer, salesman or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus and any related prospectus supplement. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus or the related prospectus supplement. This prospectus and any related prospectus supplement do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate, nor do this prospectus and any related prospectus supplement constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. You should not assume that the information in this prospectus, any prospectus supplement, or any document incorporated by reference is accurate as of any date other than the date of the document in which such information is contained, or such other date referred to in such document, regardless of the time of any sale or issuance of a security.

Unless the context otherwise requires or as otherwise expressly stated, references in this prospectus to "Yield," "the Company," "we," "us" and "our" and similar terms refer to NRG Yield, Inc. and its direct and indirect subsidiaries on a consolidated basis. References in this prospectus to Yield Inc. refer to NRG Yield, Inc. and not any of its subsidiaries, unless the context otherwise requires. References to our "common stock" or our "preferred stock" refer to the common stock or preferred stock of NRG Yield, Inc. and not any of its subsidiaries, unless the context otherwise requires.

FORWARD-LOOKING STATEMENTS

This prospectus, any related prospectus supplement, and the documents incorporated by reference herein and therein, include forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended, (the "Exchange Act"). The words "believes," "projects," "anticipates," "plans," "expects," "intends," "estimates" and similar expressions are intended to identify forward-looking statements. These forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance and achievements, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. We believe these factors include but are not limited to those described under "Risk Factors" in this prospectus, any related prospectus supplement, and the documents incorporated by reference herein or therein. These factors, risks and uncertainties include, but are not limited to, the following:

- our ability to maintain and grow our quarterly dividend;
- potential risks to the Company as a result of the NRG Transaction (as defined below);
- our ability to successfully identify, evaluate and consummate acquisitions from third parties;
- our ability to acquire assets from NRG Energy, Inc.;
- our ability to raise additional capital due to our indebtedness, corporate structure, market conditions or otherwise;
- changes in law, including judicial decisions;
- hazards customary to the power production industry and power generation operations such as fuel and electricity price volatility, unusual weather conditions (including wind and solar conditions), catastrophic weather-related or other damage to facilities, unscheduled generation outages, maintenance or repairs, unanticipated changes to fuel supply costs or availability due to higher demand, shortages, transportation problems or other developments, environmental incidents, or electric transmission or gas pipeline system constraints and the possibility that we may not have adequate insurance to cover losses as a result of such hazards;
- our ability to operate our businesses efficiently, manage maintenance capital expenditures and costs effectively, and generate earnings and cash flows from our asset-based businesses in relation to our debt and other obligations;
- our willingness and ability of counterparties to our offtake agreements to fulfill their obligations under such agreements;
- our ability to enter into contracts to sell power and procure fuel on acceptable terms and prices as current offtake agreements expire;
- our government regulation, including compliance with regulatory requirements and changes in market rules, rates, tariffs and environmental laws;
- operating and financial restrictions placed on us and our subsidiaries that are contained in the project-level debt facilities and other agreements of certain subsidiaries and project-level subsidiaries generally, in the NRG Yield Operating LLC amended and restated revolving credit facility, in the indentures governing the \$500 million aggregate principal amount of 5.375% unsecured senior notes due 2024, issued by NRG Yield Operating LLC and the \$350 million aggregate principal amount of 5.00% unsecured senior notes due 2026, issued by NRG Yield Operating LLC and in the indentures governing the Company's \$345 million aggregate principal amount of 3.50% convertible notes due 2019 (the "3.50% Convertible Notes") and

\$287.5 million aggregate principal amount of 3.25% Convertible Notes due 2020 (the "3.25% Convertible Notes");

- Cyber terrorism and inadequate cybersecurity, or the occurrence of a catastrophic loss and the possibility that the Company may not have adequate insurance to cover losses resulting from such hazards or the inability of the Company's insurers to provide coverage;
- The Company's ability to engage in successful mergers and acquisitions activity; and
- The Company's ability to borrow additional funds and access capital markets, as well as the Company's substantial indebtedness and the possibility that the Company may incur additional indebtedness going forward.

Forward-looking statements speak only as of the date they were made, and we undertake no obligation to publicly update or revise any forward looking statements, whether as a result of new information, future events or otherwise. The foregoing review of factors that could cause our actual results to differ materially from those contemplated in any forward looking statements included in this prospectus should not be construed as exhaustive.

SUMMARY

The following summary highlights selected information contained elsewhere in this prospectus. Because it is a summary, it does not contain all of the information that you should consider before investing in our securities. You should read the entire prospectus carefully, including the "Risk Factors" section and the other documents we refer to and incorporate by reference, in order to understand this offering fully. In particular, we incorporate important business and financial information into this prospectus by reference.

Our Company

We are a dividend growth-oriented company that has historically served as the primary vehicle through which NRG Energy, Inc. (NYSE: NRG) ("NRG") owns, operates and acquires contracted renewable and conventional generation and thermal infrastructure assets. NRG, through its holdings of NRG Yield, Inc.'s Class B and Class D common stock, has a 55.1% voting interest in NRG Yield, Inc. as of March 31, 2018. On February 6, 2018, Global Infrastructure Partners ("GIP") entered into a purchase and sale agreement with NRG (the "NRG Transaction") for the acquisition of NRG's full ownership interest in NRG Yield, Inc. and NRG's renewable energy development and operations platform. The aggregate purchase price to be paid by GIP to NRG under the purchase and sale agreement is approximately \$1.375 billion, subject to certain adjustments. The NRG Transaction is subject to certain closing conditions, including customary legal and regulatory approvals. The Company expects the NRG Transaction to close in the second half of 2018.

In connection with the NRG Transaction, we entered into a consent and indemnity agreement (the "Consent and Indemnity Agreement") with NRG and GIP setting forth key terms and conditions of our consent to the NRG Transaction. Key provisions of the Consent and Indemnity Agreement include:

Minimized impact to cash available for distribution ("CAFD") from potential change in control costs—No more than \$10 million in reduced annual CAFD on a recurring basis that would result from changes in our cost structure or any impact from various consents.

Enhanced Right of First Offer ("ROFO") pipeline—Upon closing of the NRG Transaction, we will enter into a new right of first offer agreement with GIP that adds 550 MW to the current pipeline through the operational 150 MW Langford Wind project and the 400 MW Mesquite Star Wind project which is under development. The ROFO Agreement with NRG will be amended to remove the Ivanpah solar facility.

Financial cooperation and support—GIP has arranged a \$1.5 billion backstop credit facility to manage any change of control costs associated with our corporate debt. GIP has also committed to provide up to \$400 million in financial support, if necessary, for our purchase of the Carlsbad Energy Center.

Voting and Governance Agreement—As part of the NRG Transaction, the parties have agreed to enter into a voting and governance agreement, which would provide that:

- our Chief Executive Officer will at all times be a full-time Company employee appointed by the Board of Directors of the Company (the "Board");
- the parties thereto will use their commercially reasonable efforts to submit to our stockholders at our 2019 Annual Meeting of Stockholders a charter amendment to classify the Board into two classes (with the independent directors and directors designated by an affiliate of GIP allocated across the two classes); and
- the Board will be expanded to nine members at the closing of the NRG Transaction, comprised at that date of five directors designated by GIP, three independent directors and our Chief Executive Officer.

We believe we are well positioned to be a premier company for investors seeking stable and growing dividend income from a diversified portfolio of lower-risk assets. We own a diversified portfolio of contracted renewable and conventional generation and thermal infrastructure assets in the

U.S. Our contracted generation portfolio collectively represents 5,118 net Megawatts ("MWs") as of March 31, 2018. Nearly all of these assets sell substantially all of their output pursuant to long-term offtake agreements with creditworthy counterparties. The weighted average remaining contract duration of these offtake agreements was approximately 15 years as of March 31, 2018 based on CAFD. We also own thermal infrastructure assets with an aggregate steam and chilled water capacity of 1,319 net Megawatts Thermal ("MWt") and electric generation capacity of 123 net MWs. These thermal infrastructure assets provide steam, hot and/or chilled water, and, in some instances, electricity to commercial businesses, universities, hospitals and governmental units in multiple locations, principally through long-term contracts or pursuant to rates regulated by state utility commissions.

We were incorporated as a Delaware corporation on December 20, 2012. Our Class A common stock is listed on the New York Stock Exchange under the symbol "NYLD.A," and our Class C common stock is listed on the New York Stock Exchange under the symbol "NYLD." Our headquarters and principal executive offices are located at 804 Carnegie Center, Princeton, New Jersey 08540. Our telephone number is (609) 524-4500. Our website is www.nrgyield.com. Information on our website is not part of this prospectus and is not incorporated into this prospectus by reference.

You can get more information regarding our business by reading our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2018, and the other reports we file with the SEC. See "Where You Can Find More Information."

RISK FACTORS

Our business is subject to uncertainties and risks. You should carefully consider and evaluate all of the information included and incorporated by reference in this prospectus, including the risk factors incorporated by reference from our most recent Annual Report on Form 10-K, as updated by our Quarterly Reports on Form 10-Q and other filings we make with the SEC, and in any prospectus supplement. It is possible that our business, financial condition, liquidity or results of operations could be materially adversely affected by any of these risks.

USE OF PROCEEDS

We intend to use the net proceeds from the sales of the securities as set forth in the applicable prospectus supplement.

RATIO OF EARNINGS TO FIXED CHARGES

The ratios of earnings to fixed charges and earnings to combined fixed charges and preference dividends for the periods indicated are stated below. For this purpose, "earnings" include pre-tax income (loss) before adjustments for minority interest in our consolidated subsidiaries and income or loss from equity investees, plus fixed charges and distributed income of equity investees, reduced by interest capitalized. "Fixed charges" include interest, whether expensed or capitalized, amortization of debt expense and the portion of rental expense that is representative of the interest factor in these rentals.

	Three Months Ended March 31, 2018	Year Ended December 31,				
		2017	2016	2015	2014	2013
Ratio of Earnings to Fixed Charges	1.10	1.16	1.01	1.43	1.53	2.13

We do not have any shares of preferred stock outstanding as of March 31, 2018. Our ratio of earnings to combined fixed charges and preference dividends for any given period is equivalent to our ratio of earnings to fixed charges.

DESCRIPTION OF CAPITAL STOCK

The following is a description of the material terms of our restated certificate of incorporation and our third amended and restated bylaws. The following description may not contain all of the information that is important to you. To understand them fully, you should read our restated certificate of incorporation and our third amended and restated bylaws, both of which have been filed with the SEC as exhibits to our registration statement of which this prospectus forms a part.

Authorized Capitalization

Our authorized capital stock consists, as of March 31, 2018, of:

- (i) 500,000,000 shares of Class A common stock, par value \$0.01 per share, of which 34,586,250 shares are issued and outstanding;
- (ii) 500,000,000 shares of Class B common stock, par value \$0.01 per share, of which 42,738,750 shares are issued and outstanding;
- (iii) 1,000,000,000 shares of Class C common stock, par value \$0.01 per share, of which 65,343,576 shares are issued and outstanding;
- (iv) 1,000,000,000 shares of Class D common stock, par value \$0.01 per share, of which 42,738,750 shares are issued and outstanding; and
- (v) 10,000,000 shares of preferred stock, par value \$0.01 per share, none of which are issued and outstanding.

In addition, as of March 31, 2018, (i) an aggregate of 2,000,000 shares of our Class A common stock and Class C common stock are reserved for issuance under our equity-based compensation plans, (ii) an aggregate of 42,738,750 shares of our Class A common stock are reserved for issuance upon the exchange of Class B units, (iii) an aggregate of 65,343,576 shares of our Class C common stock are reserved for issuance upon the exchange of Class D units, (iv) 18,898,893 shares of our Class A common stock are reserved for issuance upon conversion of our outstanding 3.50% Convertible Notes and (v) 13,068,169 shares of our Class C common stock are reserved for issuance upon conversion of our outstanding 3.25% Convertible Notes. Unless our Board of Directors determines otherwise, we will issue all shares of our capital stock in uncertificated form.

Class A Common Stock

Voting Rights

Each share of Class A common stock entitles the holder to one vote with respect to each matter presented to our stockholders on which the holders of Class A common stock are entitled to vote. Holders of shares of our Class A common stock, Class B common stock, Class C common stock and Class D common stock vote together as a single class on all matters presented to our stockholders for their vote or approval, except as otherwise required by applicable law or the listing requirements of any exchange on which shares of our common stock are listed. Holders of our Class A common stock will not have cumulative voting rights. Except in respect of matters relating to the election and removal of directors on our Board of Directors and as otherwise provided in our restated certificate of incorporation or required by law, all matters to be voted on by holders of our Class A common stock, Class B common stock, Class C common stock and Class D common stock must be approved by a majority, on a combined basis, of such shares present in person or by proxy at the meeting and entitled to vote on the subject matter. In the case of election of directors, all matters to be voted on by our stockholders must be approved by a plurality of the votes entitled to be cast by all shares of our common stock on a combined basis.

Dividend Rights

Subject to preferences that may be applicable to any then outstanding preferred stock, the holders of our outstanding shares of Class A common stock are entitled to receive dividends, if any, as may be declared from time to time by our Board of Directors out of legally available funds. Dividends upon our Class A common stock may be declared by our Board of Directors at any regular or special meeting, and may be paid in cash, in property or in shares of capital stock. The holders of Class A common stock and Class C common stock will share ratably in all dividends as may be declared by our Board of Directors in respect of our outstanding common stock. Before payment of any dividend, there may be set aside out of any of our funds available for dividends, such sums as the Board of Directors deems proper as reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any of our property or for any proper purpose, and the Board of Directors may modify or abolish any such reserve. Furthermore, because we are a holding company, our ability to pay dividends on our Class A common stock is limited by restrictions on the ability of our subsidiaries to pay dividends or make other distributions to us, including restrictions under the terms of the agreements governing our indebtedness.

Liquidation Rights

In the event of any voluntary or involuntary liquidation, dissolution or winding up of our affairs, holders of our Class A common stock would be entitled to share ratably in our assets that are legally available for distribution to stockholders after payment of our debts and other liabilities and the liquidation preference of any of our outstanding shares of preferred stock, subject only to the right of the holders of shares of our Class B common stock and Class D common stock to receive payment for the par value of their shares in connection with our liquidation.

Other Rights

Holders of our Class A common stock have no preemptive, conversion or other rights to subscribe for additional shares. All outstanding shares are, and all shares offered by this prospectus will be, when sold, validly issued, fully paid and nonassessable. The rights, preferences and privileges of the holders of our Class A common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of our preferred stock that we may designate and issue in the future.

Listing

Our Class A common stock is listed on the NYSE under the symbol "NYLD.A."

Transfer Agent and Registrar

The transfer agent and registrar for our Class A common stock is Computershare Shareowner Services, LLC.

Class B Common Stock

Voting Rights

Each share of Class B common stock entitles the holder to one vote with respect to each matter presented to our stockholders on which the holders of Class B common stock are entitled to vote. Holders of shares of our Class A common stock, Class B common stock, Class C common stock and Class D common stock vote together as a single class on all matters presented to our stockholders for their vote or approval, except as otherwise required by applicable law or the listing requirements of any exchange on which shares of our common stock are listed. Holders of our Class B common stock do not have cumulative voting rights. Except in respect of matters relating to the election and removal of

directors on our Board of Directors and as otherwise provided in our restated certificate of incorporation or required by law, all matters to be voted on by holders of our Class A common stock, Class B common stock, Class C common stock and Class D common stock must be approved by a majority, on a combined basis, of such shares present in person or by proxy at the meeting and entitled to vote on the subject matter. In the case of election of directors, all matters to be voted on by our stockholders must be approved by a plurality of the votes entitled to be cast by all shares of our common stock on a combined basis.

Dividend and Liquidation Rights

Holders of our Class B common stock do not have any right to receive dividends, other than dividends payable solely in shares of Class B common stock in the event of payment of a dividend in shares of common stock payable to holders of our Class A common stock and Class C common stock, or to receive a distribution upon our liquidation or winding up except for their right to receive payment for the par value of their shares of Class B common stock in connection with our liquidation.

Mandatory Redemption

Shares of Class B common stock are subject to redemption at a price per share equal to par value upon the conversion of Class B units of NRG Yield LLC ("Yield LLC") to Class A units. Shares of Class B common stock so redeemed are automatically cancelled and are not available to be reissued.

Class C Common Stock

Voting Rights

Each share of Class C common stock entitles the holder to 1/100th of one vote with respect to each matter presented to our stockholders on which the holders of Class C common stock are entitled to vote. Holders of shares of our Class A common stock, Class B common stock, Class C common stock and Class D common stock vote together as a single class on all matters presented to our stockholders for their vote or approval, except as otherwise required by applicable law or the listing requirements of any exchange on which shares of our common stock are listed. Holders of shares of our Class C common stock do not have cumulative voting rights. Except in respect of matters relating to the election and removal of directors on our Board of Directors and as otherwise provided in our restated certificate of incorporation or required by law, all matters to be voted on by holders of shares of our Class A common stock, Class B common stock, Class C common stock and Class D common stock must be approved by a majority, on a combined basis, of such shares present in person or by proxy at the meeting and entitled to vote on the subject matter. In the case of election of directors, all matters to be voted on by our stockholders must be approved by a plurality of the votes entitled to be cast by all shares of our common stock on a combined basis.

Dividend Rights

Subject to preferences that may be applicable to any then outstanding preferred stock, the holders of our outstanding shares of Class C common stock will be entitled to receive dividends, if any, as may be declared from time to time by our Board of Directors out of legally available funds. Dividends upon shares of our Class C common stock may be declared by our Board of Directors at any regular or special meeting, and may be paid in cash, in property or in shares of capital stock. The holders of shares of Class C common stock and Class A common stock will share ratably in all dividends as may be declared by our Board of Directors in respect of our outstanding common stock. Before payment of any dividend, there may be set aside out of any of our funds available for dividends, such sums as the Board of Directors deems proper as reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any of our property or for any proper purpose, and the Board of Directors

may modify or abolish any such reserve. Furthermore, because we are a holding company, our ability to pay dividends on shares of our Class C common stock will be limited by restrictions on the ability of our subsidiaries to pay dividends or make other distributions to us, including restrictions under the terms of the agreements governing our indebtedness.

Liquidation Rights

In the event of any voluntary or involuntary liquidation, dissolution or winding up of our affairs, holders of shares of our Class C common stock would be entitled to share ratably in our assets that are legally available for distribution to stockholders after payment of our debts and other liabilities and the liquidation preference of any of our outstanding shares of preferred stock, subject only to the right of the holders of shares of our Class B common stock and Class D common stock to receive payment for the par value of their shares in connection with our liquidation.

Other Rights

Holders of shares of our Class C common stock have no preemptive, conversion or other rights to subscribe for additional shares. All outstanding shares are, and all shares offered by this prospectus will be, when issued, validly issued, fully paid and nonassessable. The rights, preferences and privileges of the holders of shares of our Class C common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of our preferred stock that we may designate and issue in the future.

Equal Status

Except as expressly provided in our restated certificate of incorporation, including with respect to voting rights, shares of Class C common stock have the same rights and privileges and rank equally, share ratably and are identical in all respects to the shares of Class A common stock as to all matters, including in the event of a liquidation or in connection with a change of control. In the event of any merger, consolidation, or other business combination requiring the approval of our stockholders entitled to vote thereon (whether or not we are the surviving entity), the holders of shares of Class C common stock shall receive the same amount and form of consideration on a per share basis as the consideration, if any, received by holders of shares of Class A common stock in connection with such merger, consolidation or combination (and if holders of shares of Class A common stock are entitled to make an election as to the amount or form of consideration that such holders shall receive in any such merger, consolidation or combination with respect to their shares of Class A common stock, then the holders of shares of Class C common stock shall be entitled to make the same election as to their shares of Class C common stock). In the event of any (i) tender or exchange offer to acquire any shares of Class A common stock or Class B common stock by any third party pursuant to an agreement to which we are a party; or (ii) any tender or exchange offer or any other redemption or repurchase by us to acquire any shares of Class A common stock or Class B common stock, the holders of shares of Class C common stock shall receive the same amount and form of consideration on a per share basis as the consideration received by holders of shares of Class A common stock (and if holders of shares of Class A common stock are entitled to make an election as to the amount or form of consideration that such holders shall receive in any such tender or exchange offer or other repurchase with respect to their shares of Class A common stock, then the holders of shares of Class C common stock shall be entitled to make the same election as to their shares of Class C common stock).

Listing

Our Class C common stock is listed on the NYSE under the symbol "NYLD."

Transfer Agent and Registrar

The transfer agent and registrar for our Class C common stock is Computershare Shareowner Services, LLC.

Class D Common Stock

Voting Rights

Each share of Class D common stock entitles the holder to 1/100th of one vote with respect to each matter presented to our stockholders on which the holders of Class D common stock are entitled to vote. Holders of shares of our Class A common stock, Class B common stock, Class C common stock and Class D common stock vote together as a single class on all matters presented to our stockholders for their vote or approval except as otherwise required by applicable law or the listing requirements of any exchange on which shares of our common stock are listed. Holders of shares of our Class D common stock do not have cumulative voting rights. Except in respect of matters relating to the election and removal of directors on our Board of Directors and as otherwise provided in our restated certificate of incorporation or required by law, all matters to be voted on by holders of shares of our Class A common stock, Class B common stock, Class C common stock, and Class D common stock must be approved by a majority, on a combined basis, of such shares present in person or by proxy at the meeting and entitled to vote on the subject matter. In the case of election of directors, all matters to be voted on by our stockholders must be approved by a plurality of the votes entitled to be cast by all shares of our common stock on a combined basis.

Dividend and Liquidation Rights

Holders of shares of our Class D common stock do not have any right to receive dividends, other than dividends payable solely in shares of Class D common stock in the event of payment of a dividend in shares of common stock payable to holders of our Class A common stock and Class C common stock, or to receive a distribution upon our liquidation or winding up except for their right to receive payment for the par value of their shares of Class D common stock in connection with our liquidation.

Mandatory Redemption

Shares of Class D common stock are subject to redemption at a price per share equal to par value upon the conversion of Class D units of Yield LLC. Shares of Class D common stock so redeemed are automatically cancelled and are not available to be reissued.

Authorized but Unissued Capital Stock

Delaware law does not require stockholder approval for any issuance of authorized shares. However, the listing requirements of the NYSE, which would apply so long as the shares of Class A common stock and Class C common stock remain listed on the NYSE, require stockholder approval of certain issuances equal to or exceeding 20% of the then outstanding voting power or the then outstanding number of shares of Class A common stock and Class C common stock. These additional shares may be used for a variety of corporate purposes, including future public offerings, to raise additional capital or to facilitate acquisitions.

One of the effects of the existence of unissued and unreserved common stock or preferred stock may be to enable our Board of Directors to issue shares to persons friendly to current management, which issuance could render more difficult or discourage an attempt to obtain control of our company by means of a merger, tender offer, proxy contest or otherwise, and thereby protect the continuity of our management and possibly deprive the stockholders of opportunities to sell their shares at prices higher than prevailing market prices.

Preferred Stock

Under our restated certificate of incorporation, we will continue to be authorized to issue up to 10,000,000 shares of preferred stock, par value \$0.01 per share, none of which is issued and outstanding.

Our Board of Directors is authorized to provide for the issuance of shares of preferred stock in one or more series and to fix the preferences, powers and relative, participating, optional or other special rights, and qualifications, limitations or restrictions thereof, including the dividend rate, conversion rights, voting rights, redemption rights and liquidation preference and to fix the number of shares to be included in any such series without any further vote or action by our stockholders. Any preferred stock so issued may rank senior to our common stock with respect to the payment of dividends or amounts upon liquidation, dissolution or winding up, or both. The issuance of preferred stock may have the effect of delaying, deferring or preventing a change in control of our company without further action by the stockholders and may adversely affect the voting and other rights of the holders of common stock. The issuance of preferred stock with voting and conversion rights may adversely affect the voting power of the holders of common stock, including the loss of voting control to others. At present, we have no plans to issue any preferred stock.

Corporate Opportunity

As permitted under the Delaware General Corporation Law ("DGCL"), in our restated certificate of incorporation, we renounced any interest or expectancy in, or any offer of an opportunity to participate in, specified business opportunities that are presented to us or one or more of our officers, directors or stockholders. In recognition that directors, officers and/or employees of NRG may serve as our directors and/or officers, and NRG and its affiliates, not including us (the "NRG Entities") may engage in similar activities or lines of business that we do, our restated certificate of incorporation provides for the allocation of certain corporate opportunities between us and the NRG Entities. Specifically, none of the NRG Entities will have any duty to refrain from engaging directly or indirectly in the same or similar business activities or lines of business that we do. In the event that a director or officer of any NRG Entity who also is one of our directors or officers acquires knowledge of a potential transaction or matter which may be a corporate opportunity for any of the NRG Entities and us, we will not have any expectancy in such corporate opportunity, and the director or officer will not have any duty to present such corporate opportunity to us and may pursue or acquire such corporate opportunity for himself/herself or direct such opportunity to another person. A corporate opportunity that an officer or director of ours who is also a director or officer of any of the NRG Entities acquires knowledge of will not belong to us unless the corporate opportunity at issue is expressly offered in writing to such person solely in his or her capacity as a director or officer of ours. In addition, even if a business opportunity is presented to an officer or director of any of the NRG Entities, the following corporate opportunities will not belong to us: (1) those we are not financially able, contractually permitted or legally able to undertake; (2) those not in our line of business; (3) those of no practical advantage to us; and (4) those in which we have no interest or reasonable expectancy. Except with respect to our directors and/or officers who are also directors and/or officers of any of the NRG Entities, the corporate opportunity doctrine applies as construed pursuant to applicable Delaware laws, without limitation.

Antitakeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

In addition to the disproportionate voting rights that NRG will have following this offering as a result of its ownership of our Class B common stock and Class D common stock, some provisions of Delaware law contain, and our restated certificate of incorporation and our third amended and restated bylaws described below contain, a number of provisions which may have the effect of encouraging persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our Board of Directors rather than pursue non-negotiated takeover attempts, which we believe may result in an improvement of the terms of any such acquisition in favor of our stockholders. However, they also give our Board of Directors the power to discourage acquisitions that some stockholders may favor.

Undesignated Preferred Stock

The ability to authorize undesignated preferred stock will make it possible for our Board of Directors to issue preferred stock with superior voting, special approval, dividend or other rights or preferences on a discriminatory basis that could impede the success of any attempt to acquire us. These and other provisions may have the effect of deferring, delaying or discouraging hostile takeovers, or changes in control or management of our company.

Meetings and Elections of Directors

Special Meetings of Stockholders. Our restated certificate of incorporation provides that a special meeting of stockholders may be called only by our Board of Directors by a resolution adopted by the affirmative vote of a majority of the total number of directors then in office.

Elimination of Stockholder Action by Written Consent. Our restated certificate of incorporation and our third amended and restated bylaws provide that holders of our common stock cannot act by written consent in lieu of a meeting.

Vacancies. Any vacancy occurring on our Board of Directors and any newly created directorship may be filled only by a majority of the directors remaining in office (even if less than a quorum), subject to the rights of holders of any series of preferred stock.

Amendments

Amendments of Certificate of Incorporation. The provisions described above under "—Special Meetings of Stockholders," "—Elimination of Stockholder Action by Written Consent" and "—Vacancies" may be amended only by the affirmative vote of holders of at least two-thirds of the combined voting power of outstanding shares of our capital stock entitled to vote in the election of directors, voting together as a single class.

Amendment of Bylaws. Our Board of Directors has the power to make, alter, amend, change or repeal our bylaws or adopt new bylaws by the affirmative vote of a majority of the total number of directors then in office.

Notice Provisions Relating to Stockholder Proposals and Nominees

Our third amended and restated bylaws also impose some procedural requirements on stockholders who wish to make nominations in the election of directors or propose any other business to be brought before an annual or special meeting of stockholders.

Specifically, a stockholder may (i) bring a proposal before an annual meeting of stockholders, (ii) nominate a candidate for election to our Board of Directors at an annual meeting of stockholders, or (iii) nominate a candidate for election to our Board of Directors at a special meeting of stockholders that has been called for the purpose of electing directors, only if such stockholder delivers timely notice to our corporate secretary. The notice must be in writing and must include certain information and comply with the delivery requirements as set forth in the bylaws.

To be timely, a stockholder's notice must be received at our principal executive offices:

- in the case of a nomination or other business in connection with an annual meeting of stockholders, not later than the close of business on the 90th day nor earlier than the close of business on the 120th day prior to the first anniversary of the previous year's annual meeting of stockholders; *provided, however*, that if the date of the annual meeting is advanced more than 30 days before or delayed more than 70 days after the first anniversary of the preceding year's annual meeting, notice by the stockholder must be delivered not earlier than the close of

business on the 120th day prior to such annual meeting and not later than the close of business on the later of the 90th day prior to such annual meeting or the 10th day following the day on which public announcement of the date of such meeting is first made by us;

- in the case of a nomination in connection with a special meeting of stockholders, not earlier than the 120th day prior to such special meeting and not later than the close of business on the later of the 90th day before such special meeting or the 10th day following the day on which public announcement of the date of such meeting is first made by us.

With respect to special meetings of stockholders, our third amended and restated bylaws provide that only such business shall be conducted as shall have been stated in the notice of the meeting.

Delaware Antitakeover Law

We have opted out of Section 203 of the DGCL. However, our restated certificate of incorporation provides that in the event NRG and its affiliates cease to beneficially own at least 5% of the total voting power of all the then outstanding shares of our capital stock, we will automatically become subject to Section 203 of the DGCL. Section 203 provides that, subject to certain exceptions specified in the law, a Delaware corporation shall not engage in certain "business combinations" with any "interested stockholder" for a three-year period following the time that the stockholder became an interested stockholder unless:

- prior to such time, our Board of Directors approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock outstanding at the time the transaction commenced, excluding certain shares; or
- at or subsequent to that time, the business combination is approved by our Board of Directors and by the affirmative vote of holders of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

Generally, a "business combination" includes a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder. Subject to certain exceptions, an "interested stockholder" is a person who, together with that person's affiliates and associates, owns, or within the previous three years did own, 15% or more of our voting stock.

Under certain circumstances, Section 203 makes it more difficult for a person who would be an "interested stockholder" to effect various business combinations with a corporation for a three-year period. The provisions of Section 203 may encourage companies interested in acquiring us to negotiate in advance with our Board of Directors because the stockholder approval requirement would be avoided if our Board of Directors approves either the business combination or the transaction that results in the stockholder becoming an interested stockholder. These provisions also may make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Amendments

Any amendments to our restated certificate of incorporation, subject to the rights of holders of our preferred stock, regarding the provisions thereof summarized under "—Corporate Opportunity" or "—Antitakeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws" will require the affirmative vote of at least 66 2/3% of the voting power of all shares of our common stock then outstanding.

Third Amended and Restated Limited Liability Company Agreement of Yield LLC

The following is a description of the material terms of Yield LLC's third amended and restated limited liability company agreement.

Governance

Yield Inc. serves as the sole managing member of Yield LLC. As such, Yield Inc., and effectively our Board of Directors, controls the business and affairs of Yield LLC and is responsible for the management of its business. No other member of Yield LLC, in its capacity as such, has any authority or right to control the management of Yield LLC or to bind it in connection with any matter. Any amendment, supplement or waiver of the Yield LLC operating agreement must be approved by a majority of our independent directors.

Voting and Economic Rights of Members

Yield LLC has issued four classes of units: Class A units and Class C units, which may only be issued to Yield Inc., as the sole managing member, and Class B units and Class D units, which may only be issued to NRG and held by NRG or its permitted transferees. Units of each of the four classes have equivalent economic and other rights, except that upon issuance, each holder of a Class B unit will also be issued a share of our Class B common stock and each holder of a Class D unit will also be issued a share of our Class D common stock. Each Class B unit is exchangeable for a share of our Class A common stock, subject to equitable adjustments for stock splits, dividends and reclassifications in accordance with the terms of the Amended and Restated Exchange Agreement (as described below), and each Class D unit is exchangeable for a share of our Class C common stock, subject to equitable adjustments for stock splits, dividends and reclassifications in accordance with the terms of the Amended and Restated Exchange Agreement. When NRG or its permitted transferee exchanges a Class B unit of Yield LLC for a share of our Class A common stock, we will automatically redeem and cancel a corresponding share of our Class B common stock, and the Class B unit will automatically convert into a Class A unit of Yield LLC issued to us. When NRG or its permitted transferee exchanges a Class D unit of Yield LLC for a share of our Class C common stock, we will automatically redeem and cancel a corresponding share of our Class D common stock, and the Class D unit will automatically convert into a Class C unit of Yield LLC issued to us. None of the units have any voting rights.

Net profits and net losses and distributions by Yield LLC are allocated and made to holders of units in accordance with the respective number of membership units of Yield LLC held. Yield LLC will make distributions to us and NRG for the purpose of funding tax obligations in respect of income of Yield LLC that is allocated to the members of Yield LLC. However, Yield LLC may not make any distributions to its members if doing so would violate any agreement to which it is then a party or any law then applicable to it, have the effect of rendering it insolvent or result in it having net capital lower than that required by applicable law. Additionally, because all of our operations are conducted through NRG Yield Operating, LLC ("Yield Operating LLC"), and Yield Operating LLC's Amended and Restated Credit Agreement restricts the ability of Yield Operating LLC to make distributions to Yield LLC, Yield LLC may not have any funds available to make distributions to us and NRG (including with respect to tax obligations).

Coordination of Yield Inc. and Yield LLC

At any time Yield Inc. issues a share of its Class A common stock or Class C common stock for cash, the net proceeds therefrom will promptly be transferred to Yield LLC and Yield LLC will either:

- transfer a newly issued Class A unit of Yield LLC to Yield Inc. in the case of the issuance of a share of Class A common stock, or transfer a newly issued Class C unit of Yield LLC to Yield Inc. in the case of the issuance of a share of Class C common stock; or
- use the net proceeds to purchase a Class B unit of Yield LLC from NRG in the case of the issuance of a share of Class A common stock, which Class B unit will automatically convert into a Class A unit of Yield LLC when transferred to Yield Inc. or use the net proceeds to purchase a Class D unit of Yield LLC from NRG in the case of the issuance of a share of Class C common stock, which Class D unit will automatically convert into a Class C unit of Yield LLC when transferred to Yield Inc.

In the event Yield LLC purchases a Class B unit or a Class D unit of Yield LLC from NRG, Yield Inc. will concurrently redeem and cancel the corresponding share of its Class B common stock or Class D common stock, as applicable.

If Yield Inc. issues other classes or series of equity securities, Yield LLC will issue, and Yield Inc. will use the net proceeds therefrom to purchase, an equal amount of units with designations, preferences and other rights and terms that are substantially the same as Yield Inc.'s newly-issued equity securities. Conversely, if Yield Inc. elects to redeem any shares of its Class A common stock or Class C common stock (or its equity securities of other classes or series) for cash, Yield LLC will, immediately prior to such redemption, redeem an equal number of Class A units or Class C units (or its units of the corresponding classes or series) held by Yield Inc. upon the same terms and for the same price, as the shares of Class A common stock or Class C common stock (or equity securities of such other classes or series) so redeemed.

Issuances and Transfer of Units

Class A units and Class C units may only be issued to Yield Inc., as the sole managing member of Yield LLC, and are non-transferable except upon redemption by Yield LLC. Class B units and Class D units may only be issued to NRG. Class B units and Class D units may not be transferred without our consent, subject to such conditions as we may specify, except NRG may transfer Class B units or Class D units to a permitted transferee (including an affiliate) without our consent. NRG may not transfer any Class B units or Class D units to any person unless NRG transfers an equal number of shares of our Class B common stock or Class D common stock, as applicable, to the same transferee.

Amended and Restated Exchange Agreement

We entered into an amended and restated exchange agreement pursuant to which NRG (and certain permitted assignees and permitted transferees who acquire Class B units or Class D units of Yield LLC) may from time to time cause Yield LLC to exchange its Class B units for shares of our Class A common stock on a one-for-one basis, subject to adjustments for stock splits, stock dividends and reclassifications, or to exchange its Class D units for shares of our Class C common stock on a one-for-one basis, subject to adjustments for stock splits, stock dividends, and reclassifications (the "Amended and Restated Exchange Agreement"). The Amended and Restated Exchange Agreement also provides that, subject to certain exceptions, holders do not have the right to cause Yield LLC to exchange Class B or Class D units if Yield LLC determines that such exchange would be prohibited by law or regulation or would violate other agreements to which Yield Inc. may be subject, and Yield Inc. may impose additional restrictions on exchange that it determines necessary or advisable so that Yield LLC is not treated as a "publicly traded partnership" for U.S. federal income tax purposes.

When NRG or its permitted transferee exchanges a Class B unit of Yield LLC for a share of our Class A common stock, we will automatically redeem and cancel a corresponding share of our Class B common stock and the Class B unit will automatically convert into a Class A unit when issued to Yield Inc. Similarly, when NRG or its permitted transferee exchanges a Class D unit of Yield LLC for a share of our Class C common stock, we will automatically redeem and cancel a corresponding share of our Class D common stock and the Class D unit will automatically convert into a Class C unit when issued to Yield Inc. As a result, when a holder exchanges its Class B units for shares of our Class A common stock, or its Class D units for shares of our Class C common stock, our interest in Yield LLC will be correspondingly increased. We have reserved for issuance 42,738,750 shares of our Class A common stock, which is the aggregate number of shares of Class A common stock expected to be issued over time upon the exchange of all Class B units of Yield LLC currently outstanding, and 42,738,750 shares of our Class C common stock, which is the aggregate number of shares of Class C common stock expected to be issued over time upon the exchange of all Class D units of Yield LLC currently outstanding.

Indemnification and Exculpation

To the extent permitted by applicable law, Yield LLC will indemnify its managing member, our authorized officers and our other employees and agents from and against any losses, liabilities, damages, costs, expenses, fees or penalties incurred in connection with serving in such capacities, provided that the acts or omissions of these indemnified persons are not the result of fraud, intentional misconduct or a violation of the implied contractual duty of good faith and fair dealing, or any lesser standard of conduct permitted under applicable law.

Such authorized officers and other employees and agents will not be liable to Yield LLC, its members or their affiliates for damages incurred as a result of any acts or omissions of these persons, provided that the acts or omissions of these exculpated persons are not the result of fraud, intentional misconduct or a violation of the implied contractual duty of good faith and fair dealing, or any lesser standard of conduct permitted under applicable law.

Amended and Restated Registration Rights Agreement

We entered into an amended and restated registration rights agreement with NRG pursuant to which NRG and its affiliates will be entitled to demand registration rights, including the right to demand that a shelf registration statement be filed, and "piggyback" registration rights, for shares of our Class A common stock that are issuable upon exchange of Class B units of Yield LLC that it owns, and for shares of our Class C common stock that are issuable upon exchange of Class D units of Yield LLC that it owns.

DESCRIPTION OF DEBT SECURITIES

We may offer secured or unsecured debt securities, which may be convertible or non-convertible. Our debt securities will be issued under an indenture to be entered into between us and Delaware Trust Company.

We have summarized certain general features of the debt securities from the indenture. A form of indenture is filed as an exhibit to the registration statement of which this prospectus forms a part. The following description of the terms of the debt securities sets forth certain general terms and provisions. The particular terms of the debt securities offered by any prospectus supplement and the extent, if any, to which these general provisions may apply to the debt securities will be described in the related prospectus supplement.

General

The aggregate principal amount of debt securities that may be issued under the indenture is unlimited. The debt securities may be issued in one or more series as may be authorized from time to time.

Reference is made to the applicable prospectus supplement for the following terms of the debt securities (if applicable):

- title and aggregate principal amount;
- whether the securities will be senior or subordinated;
- applicable subordination provisions, if any;
- whether securities issued by us will be entitled to the benefits of any form of guarantee;
- conversion or exchange into other securities;
- whether securities issued by us will be secured or unsecured, and if secured, what the collateral will consist of;
- percentage or percentages of principal amount at which such securities will be issued;
- maturity date(s);
- interest rate(s) or the method for determining the interest rate(s);
- dates on which interest will accrue or the method for determining dates on which interest will accrue and dates on which interest will be payable;
- redemption (including upon a "change of control") or early repayment provisions;
- authorized denominations;
- form;
- amount of discount or premium, if any, with which such securities will be issued;
- whether such securities will be issued in whole or in part in the form of one or more global securities;
- identity of the depositary for global securities;
- whether a temporary security is to be issued with respect to such series and whether any interest payable prior to the issuance of definitive securities of the series will be credited to the account of the persons entitled thereto;
- the terms upon which beneficial interests in a temporary global security may be exchanged in whole or in part for beneficial interests in a definitive global security or for individual definitive securities;
- conversion or exchange features;
- any covenants applicable to the particular debt securities being issued;
- any defaults and events of default applicable to the particular debt securities being issued;
- currency, currencies or currency units in which the purchase price for, the principal of and any premium and any interest on, such securities will be payable;
- time period within which, the manner in which and the terms and conditions upon which the purchaser of the securities can select the payment currency;

- securities exchange(s) on which the securities will be listed, if any;
- whether any underwriter(s) will act as market maker(s) for the securities;
- extent to which a secondary market for the securities is expected to develop;
- additions to or changes in the events of default with respect to the securities and any change in the right of the trustee or the holders to declare the principal, premium and interest with respect to such securities to be due and payable;
- provisions relating to covenant defeasance and legal defeasance;
- provisions relating to satisfaction and discharge of the indenture;
- provisions relating to the modification of the indenture both with and without the consent of holders of debt securities issued under the indenture; and
- additional terms not inconsistent with the provisions of the indenture.

One or more series of debt securities may be sold at a substantial discount below their stated principal amount, bearing no interest or interest at a rate which at the time of issuance is below market rates. One or more series of debt securities may be variable rate debt securities that may be exchanged for fixed rate debt securities.

United States federal income tax consequences and special considerations, if any, applicable to any such series will be described in the applicable prospectus supplement.

Debt securities may be issued where the amount of principal and/or interest payable is determined by reference to one or more currency exchange rates, commodity prices, equity indices or other factors. Holders of such securities may receive a principal amount or a payment of interest that is greater than or less than the amount of principal or interest otherwise payable on such dates, depending upon the value of the applicable currencies, commodities, equity indices or other factors. Information as to the methods for determining the amount of principal or interest, if any, payable on any date, the currencies, commodities, equity indices or other factors to which the amount payable on such date is linked and certain additional United States federal income tax considerations will be set forth in the applicable prospectus supplement.

The term "debt securities" includes debt securities denominated in U.S. dollars or, if specified in the applicable prospectus supplement, in any other freely transferable currency or units based on or relating to foreign currencies.

We expect most debt securities to be issued in fully registered form without coupons and in denominations of \$2,000 and any integral multiple of \$1,000 in excess thereof. Subject to the limitations provided in the indenture and as otherwise described in the applicable prospectus supplement, debt securities that are issued in registered form may be transferred or exchanged at the corporate trust office of the trustee, without the payment of any service charge, other than any tax or other governmental charge payable in connection therewith.

Global Securities

The debt securities of a series may be issued in whole or in part in the form of one or more global securities that will be deposited with, or on behalf of, a depository (the "depository") identified in the applicable prospectus supplement. Global securities will be issued in registered form and in either temporary or definitive form. Unless and until it is exchanged in whole or in part for the individual debt securities, a global security may not be transferred except as a whole by the depository for such global security to a nominee of such depository or by a nominee of such depository to such depository or another nominee of such depository or by such depository or any such nominee to a successor of

such depositary or a nominee of such successor. The specific terms of the depositary arrangement with respect to any debt securities of a series and the rights of and limitations upon owners of beneficial interests in a global security will be described in the applicable prospectus supplement.

Governing Law

The indenture and the debt securities shall be construed in accordance with and governed by the laws of the State of New York, without giving effect to the principles thereof relating to conflicts of law.

PLAN OF DISTRIBUTION

Initial Offering and Sale of Securities

We may sell securities from time to time in one or more transactions separately or in combination. We may sell the securities of or within any series to or through agents, underwriters, dealers, remarketing firms or other third parties or directly to one or more purchasers or through a combination of any of these methods. We may issue securities as a dividend or distribution. In some cases, we or dealers acting with us or on behalf of us may also purchase securities and reoffer them to the public. We may also offer and sell, or agree to deliver, securities pursuant to, or in connection with, any option agreement or other contractual arrangement.

Agents whom we designate may solicit offers to purchase the securities.

- If required, we will name any agent involved in offering or selling securities, and disclose any commissions that we will pay to the agent, in the applicable prospectus supplement.
- Unless we indicate otherwise in the applicable prospectus supplement, agents will act on a best efforts basis for the period of their appointment.
- Agents may be deemed to be underwriters under the Securities Act of 1933, of any of the securities that they offer or sell.

We may use an underwriter or underwriters in the offer or sale of the securities.

- If we use an underwriter or underwriters, we will execute an underwriting agreement with the underwriter or underwriters at the time that we reach an agreement for the sale of the securities.
- We will include the names of the specific managing underwriter or underwriters, as well as the names of any other underwriters, material relationships between the Company and underwriters, and the terms of the transactions, including the compensation the underwriters and dealers will receive, in the applicable prospectus supplement.
- The underwriters will use the applicable prospectus supplement, together with this prospectus, to sell the securities.

We may use a dealer to sell the securities.

- If we use a dealer, we will sell the securities to the dealer, as principal.
- The dealer will then sell the securities to the public at varying prices that the dealer will determine at the time it sells the securities.
- We will include the name of the dealer and the terms of the transactions with the dealer in the applicable prospectus supplement.

We may solicit directly offers to purchase the securities, and we may directly sell the securities to institutional or other investors. We will describe the terms of direct sales in the applicable prospectus supplement.

We may engage in "at the market offerings" within the meaning of Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market on an exchange or otherwise.

We may also offer and sell securities, if so indicated in the applicable prospectus supplement, in connection with a remarketing upon their purchase, in accordance with a redemption or repayment pursuant to their terms, or otherwise, by one or more firms referred to as remarketing firms, acting as principals for their own accounts or as our agents. Any remarketing firm will be identified and the terms of its agreement, if any, with us, and its compensation will be described in the applicable prospectus supplement. Remarketing firms may be deemed to be underwriters under the Securities Act in connection with the securities they remarket.

We may indemnify agents, underwriters, dealers and remarketing firms against certain liabilities, including liabilities under the Securities Act. Agents, underwriters, dealers and remarketing firms, or their affiliates, may be customers of, engage in transactions with or perform services for us or our respective affiliates, in the ordinary course of business.

We may authorize agents and underwriters to solicit offers by certain institutions to purchase the securities at the public offering price under delayed delivery contracts.

- If we use delayed delivery contracts, we will disclose that we are using them in the prospectus supplement and will tell you when we will demand payment and delivery of the securities under the delayed delivery contracts.
- These delayed delivery contracts will be subject only to the conditions that we describe in the prospectus supplement.
- We will describe in the applicable prospectus supplement the commission that underwriters and agents soliciting purchases of the securities under delayed contracts will be entitled to receive.

Any underwriter, agent or dealer that is a Financial Industry Regulatory Authority member is not permitted to sell securities in an offering to accounts over which it exercises discretionary authority without the prior specific written approval of its customer.

Unless otherwise specified in connection with a particular underwritten offering of securities, the underwriters will not be obligated to purchase offered securities unless specified conditions are satisfied, and if the underwriters do purchase any offered securities, they will purchase all offered securities.

We may enter into derivative or other hedging transactions involving the securities with third parties, or sell securities not covered by the prospectus to third parties in privately-negotiated transactions. If we so indicate in the applicable prospectus supplement, in connection with those derivative transactions, the third parties may sell securities covered by this prospectus and the related prospectus supplement, including in short sale transactions, or may lend securities in order to facilitate short sale transactions by others. If so, the third party may use securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of securities, and may use securities received from us in settlement of those derivative or hedging transactions to close out any related open borrowings of securities. The third party in such sale transactions will be an underwriter and will be identified in the applicable prospectus supplement (or a post-effective amendment to the registration statement that includes this prospectus).

We may effect sales of securities in connection with forward sale, option or other types of agreements with third parties. Any distribution of securities pursuant to any forward sale agreement may be effected from time to time in one or more transactions that may take place through a stock exchange, including block trades or ordinary broker's transactions, or through broker-dealers acting either as principal or agent, or through privately-negotiated transactions, or through an underwritten public offering, or through a combination of any such methods of sale, at market prices prevailing at the time of sale, at prices relating to such prevailing market prices or at negotiated or fixed prices.

We may loan or pledge securities to third parties that in turn may sell the securities using this prospectus and the related prospectus supplement or, if we default in the case of a pledge, may offer and sell the securities from time to time using this prospectus and the related prospectus supplement. Such third parties may transfer their short positions to investors in the securities or in connection with a concurrent offering of other securities offered by this prospectus and the related prospectus supplement or otherwise.

We may sell shares of our common stock under a direct stock purchase and dividend reinvestment plan to be established after the date of this prospectus. The terms of any such plan will be set forth in the applicable prospectus supplement.

LEGAL MATTERS

Unless otherwise indicated in the applicable prospectus supplement, the validity of the securities that may be offered hereby will be passed upon for us by Ballard Spahr LLP, Philadelphia, Pennsylvania. If legal matters in connection with the offering made by this prospectus are passed on by counsel for the underwriters, dealers or agents, if any, that counsel will be named in the applicable prospectus supplement.

EXPERTS

The consolidated financial statements and schedule of NRG Yield, Inc. as of December 31, 2017 and 2016, and for each of the years in the three-year period ended December 31, 2017, and management's assessment of the effectiveness of internal control over financial reporting as of December 31, 2017 have been incorporated by reference herein and in the prospectus, in reliance upon the reports of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

INCORPORATION BY REFERENCE OF CERTAIN INFORMATION

The SEC allows the "incorporation by reference" of the information filed by us with the SEC into this prospectus, which means that important information can be disclosed to you by referring you to those documents and those documents will be considered part of this prospectus. Information that we file later with the SEC will automatically update and supersede the previously filed information. 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 Exchange Act (other than portions of these documents deemed to be "furnished" or not deemed to be "filed") are incorporated by reference herein:

- Our Annual Report on Form 10-K for the year ended December 31, 2017, filed on March 1, 2018.
- The information specifically incorporated by reference into our Annual Report on Form 10-K from our definitive proxy statement on Schedule 14A, filed on March 15, 2018.
- Our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2018, filed on May 3, 2018.

- Our Current Reports on Form 8-K filed on February 7, 2018, February 12, 2018, March 22, 2018, April 2, 2018, April 5, 2018 and April 27, 2018.
- The description of our Class A common stock and our Class C common stock contained in the Registration Statement on Form 8-A/A filed with the SEC on May 8, 2015, to register such securities under the Exchange Act including any amendment or report filed for the purpose of updating such description.

If you make a request for such information in writing or by telephone, we will provide you, without charge, a copy of any or all of the information incorporated by reference into this prospectus. Any such request should be directed to:

NRG Yield, Inc.
804 Carnegie Center
Princeton, NJ 08540
(609) 524-4500
Attention: Corporate Secretary

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You can inspect and copy any materials we file at the Public Reference Room of the SEC, 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room. Our SEC filings will also be available to you on the SEC's website at www.sec.gov and through the New York Stock Exchange, 20 Broad Street, New York, New York 10005, on which our Class A common stock and our Class C common stock are listed.

We have filed with the SEC a registration statement on Form S-3 relating to the securities covered by this prospectus. This prospectus, which forms a part of the registration statement, does not contain all the information that is included in the registration statement. You will find additional information about us in the registration statement. Any statements made in this prospectus concerning the provisions of legal documents are not necessarily complete and you should read the documents that are filed as exhibits to the registration statement or otherwise filed with the SEC for a more complete understanding of the document or matter.

NRG Yield, Inc.
Class C Common Stock



PROSPECTUS SUPPLEMENT

Barclays
Credit Suisse
J.P. Morgan
RBC Capital Markets
