424**B**³**ttp**://www.oblible.com

Use these links to rapidly review the document <u>TABLE OF CONTENTS</u>

Table of Contents

Filed Pursuant to Rule 424(b)(5) Registration No. 333-213765-04

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered	Proposed maximum offering price per unit	Proposed maximum aggregate offering price	Amount of registration fee(1)
First Mortgage Bonds, 3.80% Series				
due 2028	\$600,000,000	99.815%	\$598,890,000	\$74,561.81
First Mortgage Bonds, 4.20% Series				
due 2048	\$400,000,000	99.861%	\$399,444,000	\$49,730.78
Total First Mortgage Bonds	\$1,000,000,000		\$998,334,000	\$124,292.59

(1) The filing fee, calculated in accordance with Rule 457(r) under the Securities Act of 1933, as amended, has been transmitted to the Securities and Exchange Commission in connection with the securities offered by means of this prospectus supplement.

Table of Contents

PROSPECTUS SUPPLEMENT

(To Prospectus dated January 26, 2017)



\$600,000,000 First Mortgage Bonds, 3.80% Series due 2028 \$400,000,000 First Mortgage Bonds, 4.20% Series due 2048

Duke Energy Florida, LLC is offering \$1,000,000,000 aggregate principal amount of First Mortgage Bonds in two series. We are offering \$600,000,000 aggregate principal amount of First Mortgage Bonds, 3.80% Series due 2028 (the "2028 Mortgage Bonds") and \$400,000,000 aggregate principal amount of First Mortgage Bonds, 4.20% Series due 2048 (the "2048 Mortgage Bonds" and, together with the 2028 Mortgage Bonds, the "Mortgage Bonds"). We will pay interest on the 2028 Mortgage Bonds at a rate of 3.80% per annum, payable semi-annually in arrears on January 15 and July 15 of each year, beginning on January 15, 2019. The 2028 Mortgage Bonds will mature as to principal on July 15, 2028. We will pay interest on the 2048 Mortgage Bonds at a rate of 4.20% per annum, payable semi-annually in arrears on January 15 and July 15 of each year, beginning on January 15, 2019. The 2028 Mortgage Bonds will mature as to principal on July 15 of each year, beginning on January 15, 2019. The 2048 Mortgage Bonds at a rate of 4.20% per annum, payable semi-annually in arrears on January 15 and July 15 of each year, beginning on January 15, 2019. The 2048 Mortgage Bonds will mature as to principal on July 15, 2048. The Mortgage Bonds are secured by the lien of our mortgage and rank equally with all of our other first mortgage bonds from time to time outstanding. The lien of our mortgage is discussed under "Description of First Mortgage Bonds—Ranking and Security" on page 5 of the accompanying prospectus.

We may redeem the Mortgage Bonds of either series at our option at any time and from time to time, in whole or in part, as described in this prospectus supplement under the caption "Description of the Mortgage Bonds—Redemption—Optional Redemption." In addition, upon the occurrence of specific events, we may redeem, at our option, the Mortgage Bonds of either series, in whole, but not in part, as described in this prospectus supplement under the caption "Description of the Mortgage Bonds—Redemption—Special Redemption." The Mortgage Bonds will not be entitled to the benefit of any sinking fund or to a special redemption by operation of a sinking fund.

Each series of the Mortgage Bonds is a new issue of securities with no established trading market. We do not intend to list the Mortgage Bonds on any securities exchange or include them in any automated quotation system. Please read the information provided under the caption "Description of the Mortgage Bonds" in this prospectus supplement and "Description of First Mortgage Bonds" in the accompanying prospectus for a more detailed description of the Mortgage Bonds.

Investing in the Mortgage Bonds involves risks. See "Risk Factors" on page S-6 of this prospectus supplement.

http://www.oblible.com

	 Price to Public(1)	Energy Florida, LLC Before Expenses				
Per 2028 Mortgage Bond	 99.815%	0.65	0%	99.165%		
Total 2028 Mortgage Bonds	\$ 598,890,000 \$	3,900,00	0 \$	594,990,000		
Per 2048 Mortgage Bond	99.861%	0.87	5%	98.986%		
Total 2048 Mortgage Bonds	\$ 399,444,000 \$	3,500,00	0 \$	395,944,000		

(1) Plus accrued interest from June 21, 2018, if settlement occurs after that date.

(2) The underwriters have agreed to make a payment to us in an amount equal to \$1,700,000, including in respect of expenses incurred by us in connection with the offerings. See "Underwriting (Conflicts of Interest)."

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

We expect the Mortgage Bonds to be ready for delivery only in book-entry form through the facilities of The Depository Trust Company for the accounts of its participants, including Clearstream Banking, S.A. and Euroclear Bank S.A./N.V., on or about June 21, 2018.

Joint Book-Running Managers

Barclays	BNP PARIBAS	S PNC Capital Markets LLC	SMBC Nikko	SunTrust Robinson Humphrey					
Senior Co-Manager									
Loop Capital Markets									
	Co-Managers								
BB&T Cap	oital Markets	BNY Mellon Capital Markets, LLC	Santander	The Williams Capital Group, L.P.					
		Junior Co-Manag	ers						
Cast	leOak Securities,	L.P.		Ramirez & Co., Inc.					

The date of this prospectus supplement is June 18, 2018.

Table of Contents

You should rely only on the information contained in or incorporated by reference in this prospectus supplement, the accompanying prospectus and any free writing prospectus authorized by us. We have not, and the underwriters have not, authorized anyone to provide you with information that is different. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and the underwriters are not, making an offer to sell these securities in any jurisdiction where the offer is not permitted. You should not assume that the information contained in or incorporated by reference in this prospectus supplement, the accompanying prospectus or any free writing prospectus authorized by us is accurate as of any date other than the date of the document containing the information or such other date as may be specified therein. Our business, financial condition, liquidity, results of operations and prospects may have changed since those respective dates.

TABLE OF CONTENTS

Page

Proceeds to Duke

Prospectus Supplement

About This Prospectus Supplement	<u>S-ii</u>
Prospectus Supplement Summary	<u>S-1</u>
Risk Factors	<u>S-6</u>
Cautionary Statement Regarding Forward-Looking Information	<u>S-6</u>
Ratios of Earnings to Fixed Charges	<u>S-8</u>
Use of Proceeds	<u>S-8</u>
Description of the Mortgage Bonds	<u>S-9</u>
Certain U.S. Federal Income Tax Considerations for Non-U.S. Holders	<u>S-14</u>
Book-Entry System	<u>S-17</u>
Underwriting (Conflicts of Interest)	<u>S-21</u>
Legal Matters	<u>S-27</u>
Where You Can Find More Information	<u>S-27</u>

Prospectus

	Page
References to Additional Information	i
About This Prospectus	i
Forward-looking Statements	ii
The Company	1
Risk Factors	1
Use of Proceeds	1
Ratio of Earnings to Fixed Charges	2
Description of First Mortgage Bonds	2
Description of Debt Securities	<u>8</u>
Global Securities	<u>19</u>
Plan of Distribution	<u>20</u>
<u>Experts</u>	<u>21</u>
Validity of the Securities	<u>21</u>
Where You Can Find More Information	<u>21</u>

S-i

Table of Contents

ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of these offerings. The second part, the accompanying prospectus, gives more general information, some of which does not apply to these offerings.

If the description of the offerings varies between this prospectus supplement and the accompanying prospectus, you should rely on the information contained in or incorporated by reference in this prospectus supplement.

It is important for you to read and consider all information contained in or incorporated by reference in this prospectus supplement and the accompanying prospectus in making your investment decision. You should also read and consider the information contained in the documents to which we have referred you in "Where You Can Find More Information" in this prospectus supplement and the accompanying prospectus.

Unless we have indicated otherwise, or the context otherwise requires, references in this prospectus supplement and the accompanying prospectus to "Duke Energy Florida," "the Company," "we," "us" and "our" or similar terms are to Duke Energy Florida, LLC. References in this prospectus supplement to "First Mortgage Bonds" are to all of our first mortgage bonds issued under the Mortgage (as defined below) and from time to time outstanding.

Notice to Prospective Investors in the United Kingdom

The communication of this prospectus supplement, the accompanying prospectus and any other document or materials relating to the issue of the Mortgage Bonds offered hereby is not being made, and such documents and/or materials have not been approved, by an authorized person for the purposes of section 21 of the United Kingdom's Financial Services and Markets Act 2000, as amended (the "FSMA"). Accordingly, such documents and/or materials are not being distributed to, and must not be passed on to, the general public in the United Kingdom. The communication of such documents and/or materials as a financial promotion is only being made to those persons in the United Kingdom who have professional experience in matters relating to investments and who fall within the definition of investment professionals (as defined in Article 19(5) of the Financial Services and

Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "Financial Promotion Order")), or who fall within Article 49(2)(a) to (d) of the Financial Promotion Order, or who are any other persons to whom it may otherwise lawfully be made under the Financial Promotion Order (all such persons together being referred to as "relevant persons"). In the United Kingdom, the Mortgage Bonds offered hereby are only available to, and any investment or investment activity to which this prospectus supplement and the accompanying prospectus relates will be engaged in only with, relevant persons. Any person in the United Kingdom that is not a relevant person should not act or rely on this prospectus supplement and the accompanying prospectus or any of their contents.

Notice to Prospective Investors in the European Economic Area

Neither this prospectus supplement nor the accompanying prospectus is a prospectus for the purposes of the Prospectus Directive (as defined below). This prospectus supplement and the accompanying prospectus have been prepared on the basis that any offer of the Mortgage Bonds in any Member State of the European Economic Area (the "EEA") which has implemented the Prospectus Directive (each, a "Relevant Member State") will only be made to a legal entity which is a qualified investor under the Prospectus Directive ("Qualified Investors"). Accordingly, any person making or intending to make an offer in that Relevant Member State of Mortgage Bonds which are the subject of the offering contemplated in this prospectus supplement and the accompanying prospectus may only do so with respect to Qualified Investors. Neither Duke Energy Florida nor the underwriters have authorized, nor do they authorize, the making of any offer of Mortgage Bonds other than to Qualified

S-ii

Table of Contents

Investors. The expression "Prospectus Directive" means Directive 2003/71/EC (as amended, including by Directive 2010/73/EU), and includes any relevant implementing measure in the Relevant Member State.

PRIIPs Regulation / Prospectus Directive / Prohibition of sales to EEA retail investors —The Mortgage Bonds are not intended to be offered, sold or otherwise made available to any retail investor in the EEA. For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU, as amended ("MiFID II"); or (ii) a customer within the meaning of Directive 2002/92/EC, as amended (the "Insurance Mediation Directive"), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (iii) not a qualified investor as defined in the Prospectus Directive. Consequently no key information document required by Regulation (EU) No 1286/2014, as amended (the "PRIIPs Regulation") for offering or selling the Mortgage Bonds or otherwise making them available to any retail investors in the EEA has been prepared and therefore offering or selling the Mortgage Bonds or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

S-iii

Table of Contents

PROSPECTUS SUPPLEMENT SUMMARY

The following summary is qualified in its entirety by, and should be read together with, the more detailed information that is included elsewhere in this prospectus supplement and the accompanying prospectus, as well as the information that is incorporated or deemed to be incorporated by reference in this prospectus supplement and the accompanying prospectus. See "Where You Can Find More Information" in this prospectus supplement for information that is incorporated or deemed to be incorporated supplement and the accompanying the information that is incorporated or deemed to be incorporated by reference in this prospectus supplement and the accompanying the information that is incorporated or deemed to be incorporated by reference in this prospectus supplement and the accompanying prospectus supplement and the accompanying in the Mortgage Bonds involves risks. See "Risk Factors" in this prospectus supplement.

Duke Energy Florida, LLC

Duke Energy Florida, LLC, a Florida limited liability company and an indirect wholly owned subsidiary of Duke Energy Corporation, is a regulated public utility primarily engaged in the generation, transmission, distribution and sale of electricity in portions of Florida. Duke Energy Florida's service area covers approximately 13,000 square miles and supplies electric service to approximately 1.8 million residential, commercial and industrial customers. As of December 31, 2017, our asset portfolio included approximately 9,305 megawatts of owned generation capacity, 46,000 miles of distribution lines and 4,900 miles of transmission lines.

The address of our principal executive offices is 299 First Avenue North, St. Petersburg, Florida 33701. Our telephone number is (704) 382-3853.

The foregoing information about Duke Energy Florida is only a general summary and is not intended to be comprehensive. For additional

information about Duke Energy Florida, you should refer to the information described under the caption "Where You Can Find More Information" in this prospectus supplement.

S-1

Table of Contents

	The Offerings
Issuer	Duke Energy Florida, LLC
Securities Offered	We are offering \$600,000,000 aggregate principal amount of the 2028 Mortgage Bonds and \$400,000,000 aggregate principal amount of the 2048 Mortgage Bonds.
Maturity Dates	The 2028 Mortgage Bonds will mature on July 15, 2028. The 2048 Mortga Bonds will mature on July 15, 2048.
Interest Rates	The per annum interest rate on the 2028 Mortgage Bonds will be 3.80%. T per annum interest rate on the 2028 Mortgage Bonds will be 4.20%.
Interest Payment Dates	Interest on the Mortgage Bonds will be payable semi-annually in arrears o January 15 and July 15 of each year, beginning on January 15, 2019.
Ranking	The Mortgage Bonds are two new series of First Mortgage Bonds and will secured by the lien of the Mortgage and will rank equally with all our othe First Mortgage Bonds from time to time outstanding. See "Description of t Mortgage Bonds—Ranking and Security." At March 31, 2018, we had outstanding approximately \$4.5 billion in aggregate principal amount of Fi Mortgage Bonds (which amount does not include \$500 million aggregate principal amount of First Mortgage Bonds, 5.65% Series due June 15, 2018 (the "5.65% Bonds")), which will rank equally with the Mortgage Bonds.
Further Issuance	Subject to the limits contained in our Mortgage that are described under "Description of the Mortgage Bonds—Basis for Issuance of the Mortgage Bonds," we may, at any time, without the consent of the holders of the Mortgage Bonds, issue additional First Mortgage Bonds having the same ranking, interest rate, maturity and other terms as the Mortgage Bonds of either series being offered hereby; provided, however, that such additional First Mortgage Bonds must be fungible with the applicable Mortgage Bond offered hereby for U.S. federal income tax purposes, and any such addition First Mortgage Bonds, together with the Mortgage Bonds of such series, w be taken to constitute the same series of First Mortgage Bonds under the Mortgage.
Collateral	In the opinion of our counsel, the Mortgage Bonds will be secured by a first mortgage lien, subject only to permitted encumbrances and liens, on substantially all of the fixed properties owned by us, except miscellaneous properties specifically excepted. After-acquired property is covered by the lien of the Mortgage, subject to existing liens at the time such property is acquired.

Optional Redemption At any time before April 15, 2028 (which is the date that is three months prior to maturity of the 2028 Mortgage Bonds (the "2028 Par Call Date")), we will have the right to redeem the 2028 Mortgage Bonds, in whole or in part and from time to time, at a redemption price equal to the greater of (1) 100% of the principal amount of the 2028 Mortgage Bonds being redeemed and (2) the sum of the present values of the remaining scheduled payments of principal and interest on the 2028 Mortgage Bonds being redeemed that would be due if the 2028 Mortgage Bonds matured on the 2028 Par Call Date (exclusive of interest accrued to the redemption date), discounted to the redemption date on a semi-annual basis (assuming a 360day year consisting of twelve 30-day months) at the Treasury Rate (as defined below) plus 15 basis points, plus, in either case, accrued and unpaid interest on the principal amount of the 2028 Mortgage Bonds being redeemed to, but excluding, such redemption date. At any time on or after the 2028 Par Call Date, we will have the right to redeem the 2028 Mortgage Bonds, in whole or in part and from time to time, at a redemption price equal to 100% of the principal amount of the 2028 Mortgage Bonds being redeemed plus accrued and unpaid interest on the principal amount of the 2028 Mortgage Bonds being redeemed to, but excluding, such redemption date. See "Description of the Mortgage Bonds-Redemption-Optional Redemption." At any time before January 15, 2048 (which is the date that is six months prior to maturity of the 2048 Mortgage Bonds (the "2048 Par Call Date")), we will have the right to redeem the 2048 Mortgage Bonds, in whole or in part and from time to time, at a redemption price equal to the greater of (1) 100% of the principal amount of the 2048 Mortgage Bonds being redeemed and (2) the sum of the present values of the remaining scheduled payments of principal and interest on the 2048 Mortgage Bonds being redeemed that would be due if the 2048 Mortgage Bonds matured on the 2048 Par Call Date (exclusive of interest accrued to the redemption date), discounted to the redemption date on a semi-annual basis (assuming a 360day year consisting of twelve 30-day months) at the Treasury Rate plus 20 basis points, plus, in either case, accrued and unpaid interest on the principal amount of the 2048 Mortgage Bonds being redeemed to, but excluding, such redemption date. At any time on or after the 2048 Par Call Date, we will have the right to redeem the 2048 Mortgage Bonds, in whole or in part and from time to time, at a redemption price equal to 100% of the principal amount of the 2048 Mortgage Bonds being redeemed plus accrued and unpaid interest on the principal amount of the 2048 Mortgage Bonds being redeemed to, but excluding, such redemption date. See "Description of the Mortgage Bonds-Redemption-Optional Redemption."

S-3

Table of Contents

Special Redemption

Upon the occurrence of certain specific events described under "Description of the Mortgage Bonds—Redemption—Special Redemption," we may redeem, at our option, the Mortgage Bonds of either series, together with all other outstanding First Mortgage Bonds, in whole, but not in part, at the make-whole redemption price applicable to the optional redemption of the Mortgage Bonds of such series (with respect to the 2028 Mortgage Bonds, at the redemption price applicable to the optional redemption of the 2028 Mortgage Bonds at any time before the 2028 Par Call Date, and with respect to the 2048 Mortgage Bonds, at the redemption price applicable to the optional redemption of the 2048 Mortgage Bonds at any time before the 2048 Par Call Date) as described

	above, plus accrued and unpaid interest to, but excluding, the redemption date. See "Description of the Mortgage Bonds—Redemption—Special Redemption."
No Sinking Fund	The Mortgage Bonds will not be entitled to the benefit of any sinking fund or to a special redemption by operation of a sinking fund.
Basis for Issuance of Additional First Mortgage Bonds	We will issue the Mortgage Bonds based upon the amount of previously authenticated First Mortgage Bonds that have been cancelled or delivered for cancellation. Under the terms of the Mortgage, (i) as of March 31, 2018, we could issue additional First Mortgage Bonds in amounts up to approximately \$2.9 billion based upon the bondable value of property additions and (ii) as of June 15, 2018, we could issue additional First Mortgage Bonds in amounts equal to approximately \$1.3 billion (approximately \$300 million after giving effect to the offerings) based upon the amount of previously authenticated First Mortgage Bonds that have been cancelled or delivered for cancellation.
Use of Proceeds	The aggregate net proceeds from the sale of the Mortgage Bonds, after deducting the respective underwriting discounts and related offering expenses and giving effect to the underwriters' payment to us, will be approximately \$991.7 million. The aggregate net proceeds from the sale of the Mortgage Bonds will be used (i) to repay a portion of our outstanding intercompany short-term debt under our money-pool borrowing arrangement with Duke Energy Corporation and a portion of our outstanding commercial paper, which borrowings were used to repay at maturity the 5.65% Bonds and (ii) for general company purposes, including to fund capital expenditures for ongoing construction and capital maintenance. At June 15, 2018, we had approximately \$389 million of outstanding money-pool and commercial paper borrowings at an annual interest rate of 2.28%.

S-4

We expect that the sales of the 2028 Mortgage Bonds and the 2048 Mortgage Bonds will take place concurrently. However, the sales of the 2028 Mortgage Bonds and the 2048 Mortgage Bonds are not conditioned upon each other, and we may consummate the sale of one series and not the other, or consummate the sales at different times. Conflicts of Interest Some of the underwriters or their affiliates may own some of our commercial paper, the repayment of which will be funded with a portion of the aggregate net proceeds from the sale of the Mortgage Bonds. See "Underwriting (Conflicts of Interest)-Conflicts of Interest." Book-Entry Each series of the Mortgage Bonds will be represented by one or more global securities registered in the name of and deposited with or on behalf of The Depository Trust Company ("DTC") or its nominee. Beneficial interests in each series of the Mortgage Bonds will be represented through book-entry accounts of financial institutions acting on behalf of beneficial owners as direct and indirect participants in DTC. Investors may elect to hold interests in the global securities through either DTC in the United States or Clearstream Banking, S.A. ("Clearstream") or Euroclear Bank S.A./N.V., as operator of the Euroclear System (the "Euroclear System") in Europe if they are participants in those systems, or indirectly through organizations which are participants in those systems. This means that you will not receive a certificate for your Mortgage Bonds and Mortgage Bonds will not be registered in your name, except under certain limited circumstances described under the caption "Book-Entry System." Mortgage Trustee The Bank of New York Mellon.

https://www.sec.gov/Archives/edgar/data/37637/000104746918004560/a2236051z424b5.htm[6/19/2018 12:34:29 PM]

Table of Contents

Table of Contents

RISK FACTORS

You should carefully consider the risk factors in our Annual Report on Form 10-K, as amended, for the year ended December 31, 2017, which has been filed with the Securities and Exchange Commission (the "SEC") and is incorporated by reference in this prospectus supplement and the accompanying prospectus, as well as all of the other information included or incorporated by reference in this prospectus supplement and the accompanying prospectus, before making an investment decision.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION

This prospectus supplement, the accompanying prospectus, and the information incorporated by reference herein and therein, include forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements are based on management's beliefs and assumptions and can often be identified by terms and phrases that include "anticipate," "believe," "intend," "estimate," "expect," "continue," "should," "could," "may," "plan," "project," "predict," "will," "potential," "forecast," "target," "guidance," "outlook," or other similar terminology. Various factors may cause actual results to be materially different than the suggested outcomes within forward-looking statements; accordingly, there is no assurance that such results will be realized. These factors include, but are not limited to:

- State and federal legislative and regulatory initiatives, including costs of compliance with existing and future environmental requirements, including those related to climate change, as well as rulings that affect cost and investment recovery or have an impact on rate structures or market prices;
- The extent and timing of costs and liabilities to comply with federal and state laws, regulations, and legal requirements related to coal ash remediation, including amounts for required closure of certain ash impoundments, are uncertain and difficult to estimate;
- The ability to recover eligible costs, including amounts associated with coal ash impoundment retirement obligations and costs related to significant weather events, and to earn an adequate return on investment through rate case proceedings and the regulatory process;
- The costs of decommissioning Crystal River Unit 3 and other nuclear facilities could prove to be more extensive than amounts estimated and all costs may not be fully recoverable through the regulatory process;
- Costs and effects of legal and administrative proceedings, settlements, investigations and claims;
- Industrial, commercial and residential growth or decline in our service territories or customer bases resulting from sustained downturns of the economy and the economic health of our service territories or variations in customer usage patterns, including energy efficiency efforts and use of alternative energy sources, such as self-generation and distributed generation technologies;
- Federal and state regulations, laws and other efforts designed to promote and expand the use of energy efficiency measures and distributed generation technologies, such as private solar and battery storage, in Duke Energy Florida service territories could result in customers leaving the electric distribution system, excess generation resources as well as stranded costs;
- Advancements in technology;
- Additional competition in electric and natural gas markets and continued industry consolidation;
- The influence of weather and other natural phenomena on our operations, including the economic, operational and other effects of severe storms, hurricanes, droughts, earthquakes and tornadoes, including extreme weather associated with climate change;

S-6

Table of Contents

The ability to successfully operate electric generating facilities and deliver electricity to customers including direct or indirect effects to Duke Energy Florida resulting from an incident that affects the U.S. electric grid or generating resources;

- Operational interruptions to our natural gas distribution and transmission activities;
- The impact on our facilities and business from a terrorist attack, cybersecurity threats, data security breaches and other catastrophic events, such as fires, explosions, pandemic health events or other similar occurrences;
- The inherent risks associated with the operation of nuclear facilities, including environmental, health, safety, regulatory and financial risks, including the financial stability of third-party service providers;
- The timing and extent of changes in commodity prices and interest rates and the ability to recover such costs through the regulatory process, where appropriate, and their impact on liquidity positions and the value of underlying assets;
- The results of financing efforts, including our ability to obtain financing on favorable terms, which can be affected by various factors, including our credit ratings, interest rate fluctuations, compliance with debt covenants and conditions and general market and economic conditions;
- The credit ratings of Duke Energy Florida may be different from what is expected;
- Declines in the market prices of equity and fixed-income securities and resultant cash funding requirements for defined benefit pension plans, other post-retirement benefit plans, and nuclear decommissioning trust funds;
- Construction and development risks associated with the completion of our capital investment projects, including risks related to financing, obtaining and complying with terms of permits, meeting construction budgets and schedules and satisfying operating and environmental performance standards, as well as the ability to recover costs from customers in a timely manner, or at all;
- Changes in rules for regional transmission organizations, including changes in rate designs and new and evolving capacity markets, and risks related to obligations created by the default of other participants;
- The ability to control operation and maintenance costs;
- The level of creditworthiness of counterparties to transactions;
- Employee workforce factors, including the potential inability to attract and retain key personnel;
- The effect of accounting pronouncements issued periodically by accounting standard-setting bodies;
- The impact of new U.S. tax legislation to our financial condition, results of operations or cash flows and our credit ratings; and
- The ability to implement our business strategy.

Additional risks and uncertainties are identified and discussed in our reports filed with the SEC and available at the SEC's website. In light of these risks, uncertainties and assumptions, the events described in the forward-looking statements included or incorporated by reference in this prospectus supplement and the accompanying prospectus might not occur or might occur to a different extent or at a different time than described. Forward-looking statements speak only as of the date they are made and we expressly disclaim an obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

S-7

Table of Contents

RATIOS OF EARNINGS TO FIXED CHARGES

The ratios of earnings to fixed charges have been calculated using the SEC guidelines.

	Three Months Ended	Year Ended December 31,										
	March 31, 2018	2017	2016 (dollars in n	2015 nillions)	2014	2013						
Earnings as defined for fixed charges calculation												
Add:												

Pretax income from continuing operations(a)	\$	123	\$ 759	\$	873	\$	943	\$	898	\$	538
Fixed charges		84	336	,	264	,	284	,	294		285
Total earnings	\$	207	\$ 1,095	\$	1,137	\$	1,227	\$	1,192	\$	823
Fixed charges:	í <u>-</u>	;	;	-		-		-			
Interest on debt, including capitalized portions	\$	78	\$ 309	\$	231	\$	248	\$	252	\$	249
Estimate of interest within rental expense		6	27		33		36		42		36
Total fixed charges	\$	84	\$ 336	\$	264	\$	284	\$	294	\$	285
Ratio of earnings to fixed charges	;	2.5	3.3		4.3		4.3		4.1	2	2.9

(a) Excludes income or loss from equity investees.

USE OF PROCEEDS

The aggregate net proceeds from the sale of the Mortgage Bonds, after deducting the respective underwriting discounts and related offering expenses and giving effect to the underwriters' payment to us, will be approximately \$991.7 million. The aggregate net proceeds from the sale of the Mortgage Bonds will be used (i) to repay a portion of our outstanding intercompany short-term debt under our money-pool borrowing arrangement with Duke Energy Corporation and a portion of our outstanding commercial paper, which borrowings were used to repay at maturity the 5.65% Bonds and (ii) for general company purposes, including to fund capital expenditures for ongoing construction and capital maintenance. At June 15, 2018, we had approximately \$389 million of outstanding money-pool and commercial paper borrowings at an annual interest rate of 2.28%. Some of the underwriters or their affiliates may own some of our commercial paper, the repayment of which will be funded with a portion of the aggregate net proceeds from the sale of the Mortgage Bonds. See "Underwriting (Conflicts of Interest)—Conflicts of Interest."

We expect that the sales of the 2028 Mortgage Bonds and the 2048 Mortgage Bonds will take place concurrently. However, the sales of the 2028 Mortgage Bonds and the 2048 Mortgage Bonds are not conditioned upon each other, and we may consummate the sale of one series and not the other, or consummate the sales at different times.

Table of Contents

DESCRIPTION OF THE MORTGAGE BONDS

We will issue the Mortgage Bonds as two new series of First Mortgage Bonds under an Indenture, dated as of January 1, 1944 (the "Original Indenture"), with The Bank of New York Mellon, as successor trustee (the "Mortgage Trustee"). The Original Indenture is supplemented by supplemental indentures, including by the Fifty-Fifth Supplemental Indenture to be dated as of June 1, 2018 (the "Supplemental Indenture"), which establishes the specific terms of the Mortgage Bonds. In the following discussion, we will refer to the Original Indenture and all indentures supplemental to the Indenture together as the "Mortgage."

Please read the following information concerning the Mortgage Bonds in conjunction with the statements under "Description of First Mortgage Bonds" in the accompanying prospectus, which the following information supplements and, in the event of any inconsistencies, supersedes. Capitalized terms not defined in this prospectus supplement are used as defined in the Mortgage and the Supplemental Indenture governing the Mortgage Bonds or as otherwise provided in the accompanying prospectus.

General

We will initially offer \$1,000,000,000 aggregate principal amount of the Mortgage Bonds, consisting of \$600,000,000 aggregate principal amount of the 2028 Mortgage Bonds and \$400,000,000 aggregate principal amount of the 2048 Mortgage Bonds. Subject to the limits contained in the Mortgage that are described under "—Basis for Issuance of the Mortgage Bonds," we may, at any time, without the consent of the holders of the Mortgage Bonds, issue additional First Mortgage Bonds having the same ranking, interest rate, maturity and other terms as the Mortgage Bonds of either series being offered hereby; provided, however, that such additional First Mortgage Bonds must be fungible with the applicable Mortgage Bonds offered hereby for U.S. federal income tax purposes, and any such additional First Mortgage Bonds, together with the Mortgage Bonds of such series, will be taken to constitute the same series of First Mortgage Bonds under the Mortgage.

The Mortgage Bonds will be issuable in denominations of \$2,000 and integral multiples of \$1,000 above that amount. For more information on DTC, see "Book-Entry System—The Depository Trust Company" below.

Basis for Issuance of the Mortgage Bonds

We will issue the Mortgage Bonds under the Mortgage based upon the amount of previously authenticated First Mortgage Bonds that have been cancelled or delivered for cancellation.

- As of March 31, 2018, we could issue under the Mortgage, based upon the bondable value of property additions, up to approximately \$2.9 billion of additional First Mortgage Bonds; and
- As of June 15, 2018, we could issue under the Mortgage, based upon the amount of previously authenticated First Mortgage Bonds that have been canceled or delivered for cancellation, approximately \$1.3 billion (approximately \$300 million after giving effect to the offerings) of additional First Mortgage Bonds.

Maturity, Interest and Payment

The 2028 Mortgage Bonds will mature on July 15, 2028, and the 2048 Mortgage Bonds will mature on July 15, 2048.

We will pay interest on the 2028 Mortgage Bonds at the rate of 3.80% per annum and the 2048 Mortgage Bonds at the rate of 4.20% per annum. Interest on the Mortgage Bonds of each series will accrue from and including June 21, 2018. We will pay interest on the Mortgage Bonds of each series on

S-9

Table of Contents

January 15 and July 15 of each year, beginning on January 15, 2019. We will pay interest on the Mortgage Bonds of each series to the person(s) in whose name(s) such Mortgage Bonds are registered at the close of business on the tenth calendar day next preceding the interest payment date, provided, however, that so long as such Mortgage Bonds are registered in the name of DTC, its nominee or a successor depositary, the record date for interest payable on any interest payment date for such Mortgage Bonds so registered shall be the close of business on the business day immediately preceding such interest payment date. Interest will be computed on the basis of a 360-day year comprised of twelve 30-day months. If a due date for the payment of interest or principal falls on a day that is not a business day, then the payment will be made on the next succeeding business day, and no interest will accrue on the amounts payable for the period from and after the original due date and until the next business day.

Pursuant to the Mortgage, we will pay interest, to the extent enforceable under law, on any overdue installment of interest on the Mortgage Bonds at the highest rate of interest payable on any of the First Mortgage Bonds outstanding under the Mortgage.

Ranking and Security

The Mortgage Bonds will be secured by the lien of the Mortgage and will rank equally with all our other First Mortgage Bonds from time to time outstanding. At March 31, 2018, we had approximately \$4.5 billion in aggregate principal amount of First Mortgage Bonds outstanding (which amount does not include \$500 million aggregate principal amount of the 5.65% Bonds), which will rank equally with the Mortgage Bonds. In the opinion of our counsel, the Mortgage constitutes a first mortgage lien, subject only to permitted encumbrances and liens, on substantially all of the fixed properties owned by us, except miscellaneous properties specifically excepted. After-acquired property is covered by the lien of the Mortgage, subject to existing liens at the time such property is acquired.

Dividend Restrictions

So long as any First Mortgage Bonds are outstanding, we may only pay cash dividends on our common stock, and make any other distribution to Progress Energy, Inc., our common stockholder, out of our net income subsequent to December 31, 1943. For purposes of the Mortgage, the terms (i) "dividend" shall be interpreted so as to include distributions and (ii) "common stock" shall be interpreted so as to include membership interests.

Redemption

The Mortgage Bonds of each series are redeemable prior to maturity, as set forth below. We have agreed that before any applicable redemption date for either series, we will deposit with the Mortgage Trustee a sum of money equal to the applicable redemption price. If we elect to redeem any Mortgage Bonds of either series, we will notify the Mortgage Trustee of our election at least 45 days prior to the redemption date, or a shorter period acceptable to the Mortgage Trustee, including in the notice of redemption a reasonably detailed computation of the redemption price, or manner of calculation if not then known. Our failure to make the required deposit will constitute a completed default under the Mortgage on the specified redemption date and the subject Mortgage Bonds or, in the case of a special redemption, all outstanding First Mortgage Bonds, including the Mortgage Bonds, shall immediately become due and payable.

Optional Redemption

At any time before April 15, 2028 (which is the date that is three months prior to maturity of the 2028 Mortgage Bonds (the "2028 Par Call Date")), we will have the right to redeem the 2028 Mortgage Bonds, in whole or in part and from time to time, at a redemption price equal to the greater of

S-10

Table of Contents

(1) 100% of the principal amount of the 2028 Mortgage Bonds being redeemed and (2) the sum of the present values of the remaining scheduled payments of principal and interest on the 2028 Mortgage Bonds being redeemed that would be due if the 2028 Mortgage Bonds matured on the 2028 Par Call Date (exclusive of interest accrued to the redemption date), discounted to the redemption date on a semi-annual basis (assuming a 360-day year consisting of twelve 30-day months) at the Treasury Rate (as defined below) plus 15 basis points, plus, in either case, accrued and unpaid interest on the principal amount of the 2028 Mortgage Bonds being redeemed to, but excluding, such redemption date.

At any time on or after the 2028 Par Call Date, we will have the right to redeem the 2028 Mortgage Bonds, in whole or in part and from time to time, at a redemption price equal to 100% of the principal amount of the 2028 Mortgage Bonds being redeemed plus accrued and unpaid interest on the principal amount of the 2028 Mortgage Bonds being redeemed to, but excluding, such redemption date.

At any time before January 15, 2048 (which is the date that is six months prior to maturity of the 2048 Mortgage Bonds (the "2048 Par Call Date")), we will have the right to redeem the 2048 Mortgage Bonds, in whole or in part and from time to time, at a redemption price equal to the greater of (1) 100% of the principal amount of the 2048 Mortgage Bonds being redeemed and (2) the sum of the present values of the remaining scheduled payments of principal and interest on the 2048 Mortgage Bonds being redeemed that would be due if the 2048 Mortgage Bonds matured on the 2048 Par Call Date (exclusive of interest accrued to the redemption date), discounted to the redemption date on a semi-annual basis (assuming a 360-day year consisting of twelve 30-day months) at the Treasury Rate plus 20 basis points, plus, in either case, accrued and unpaid interest on the principal amount of the 2048 Mortgage Bonds being redeemed to, but excluding, such redemption date.

At any time on or after the 2048 Par Call Date, we will have the right to redeem the 2048 Mortgage Bonds, in whole or in part and from time to time, at a redemption price equal to 100% of the principal amount of the 2048 Mortgage Bonds being redeemed plus accrued and unpaid interest on the principal amount of the 2048 Mortgage Bonds being redeemed to, but excluding, such redemption date.

For purposes of the optional redemption provisions, the following terms have the following meanings:

"*Comparable Treasury Issue*" means the United States Treasury security selected by the Quotation Agent as having an actual or interpolated maturity comparable to the remaining term of the applicable series of Mortgage Bonds to be redeemed (assuming, for this purpose, that the 2028 Mortgage Bonds matured on the 2028 Par Call Date and the 2048 Mortgage Bonds matured on the 2048 Par Call Date), that would be utilized, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities of a comparable maturity to the remaining term of such Mortgage Bonds.

"*Comparable Treasury Price*" means, with respect to any redemption date, (A) the average of the Reference Treasury Dealer Quotations for such redemption date, after excluding the highest and lowest of such Reference Treasury Dealer Quotations, or (B) if the Quotation Agent obtains fewer than four of such Reference Treasury Dealer Quotations, the average of all such Reference Treasury Dealer Quotations as determined by us.

"Quotation Agent" means one of the Reference Treasury Dealers appointed by us.

"*Reference Treasury Dealer*" means each of (i) Barclays Capital Inc. and BNP Paribas Securities Corp. and (ii) a Primary Treasury Dealer (as defined below) selected by each of PNC Capital Markets LLC, SMBC Nikko Securities America, Inc. and SunTrust Robinson Humphrey, Inc., or their respective affiliates or successors, each of which is a primary U.S. Government securities dealer in the United States (a "Primary Treasury Dealer"); provided, however, that if any of the foregoing or their

S-11

Table of Contents

affiliates or successors shall cease to be a Primary Treasury Dealer, we shall substitute therefor another Primary Treasury Dealer.

"*Reference Treasury Dealer Quotations*" means, with respect to each Reference Treasury Dealer and any redemption date, the average, as determined by the Quotation Agent, of the bid and asked prices for the applicable Comparable Treasury Issue (expressed in each case as a percentage of its principal amount) quoted in writing to the Quotation Agent by such Reference Treasury Dealer at 5:00 p.m., New York City time, on the third business day preceding such redemption date.

"*Treasury Rate*" means, with respect to any redemption date, the rate per annum equal to the semi-annual equivalent yield to maturity or interpolated maturity (on a day count basis) of the applicable Comparable Treasury Issue, assuming a price for such Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the applicable Comparable Treasury Price for such redemption date.

Notice of redemption shall be given by mail not less than 30 nor more than 90 days prior to the date fixed for redemption to the holders of Mortgage Bonds to be redeemed, which, as long as the Mortgage Bonds are held in the book-entry only system, will be DTC, its nominee or a successor depositary. On and after the date fixed for redemption (unless we default in the payment of the redemption price and interest accrued thereon to such date), interest on the Mortgage Bonds, or the portions of them so called for redemption, shall cease to accrue. So long as the Mortgage Bonds are registered in the name of DTC, its nominee or a successor depositary, if we elect to redeem less than all of the Mortgage Bonds, DTC's practice is to

determine by lot the amount of the interest of each direct participant in DTC in the Mortgage Bonds to be redeemed. At all other times, the Mortgage Trustee shall draw by lot, in such manner as it deems appropriate, the particular Mortgage Bonds, or portions of them, to be redeemed. For further information on DTC and its practices, see "Book-Entry System—The Depository Trust Company" below.

Special Redemption

The Mortgage Bonds of each series, together with all other outstanding First Mortgage Bonds, are redeemable as a whole, but not in part, at our option, at the prices set forth below, upon not more than 90 days' notice in the event that:

- all of our outstanding common stock is acquired by some governmental body or instrumentality and we elect to redeem all outstanding First Mortgage Bonds, including the Mortgage Bonds; or
- all, or substantially all, of the mortgaged and pledged property constituting "bondable property," as defined in the Mortgage, that is then subject to the Mortgage as a first lien shall be released from the lien of the Mortgage pursuant to the provisions thereof, and available moneys held by the Mortgage Trustee, including any moneys deposited by us for the purpose, are sufficient to redeem all outstanding First Mortgage Bonds, including the Mortgage Bonds, at the applicable redemption prices (together with accrued interest to the date of redemption) upon the happening of such event.

In the event of a special redemption, the Mortgage Bonds of either series will be redeemable at the make-whole redemption price applicable to the optional redemption of the Mortgage Bonds of such series (with respect to the 2028 Mortgage Bonds, at the redemption price applicable to the optional redemption of the 2028 Mortgage Bonds at any time before the 2028 Par Call Date and with respect to the 2048 Mortgage Bonds, at the redemption price applicable to the redemption price applicable to the 2048 Mortgage Bonds at any time before the 2028 Par Call Date and with respect to the 2048 Mortgage Bonds, at the redemption price applicable to the optional redemption of the 2048 Mortgage Bonds at any time before the 2048 Par Call Date) as set forth above under "— Optional Redemption," plus accrued and unpaid interest to, but excluding, the redemption date.

S-12

Table of Contents

Sinking Fund

The Mortgage Bonds will not be entitled to the benefit of any sinking fund or to a special redemption by operation of a sinking fund.

Satisfaction and Discharge of the Mortgage

Upon our request, all mortgaged property shall be reconveyed to us, the Mortgage shall be satisfied and discharged, and the lien of the Mortgage released, when:

- we deliver to the Mortgage Trustee for cancellation all First Mortgage Bonds and coupons previously authenticated and not previously cancelled; or
- all First Mortgage Bonds not previously cancelled or delivered to the Mortgage Trustee for cancellation shall be due and payable within one year, or are to be called for redemption within one year under arrangements satisfactory to the Mortgage Trustee for the giving of notice of redemption, and we have deposited with the Mortgage Trustee cash sufficient to pay at maturity or upon redemption all of such bonds; and
- we have paid or caused to be paid all other sums payable under the Mortgage.

Concerning the Mortgage Trustee

The Bank of New York Mellon is the Mortgage Trustee. Duke Energy Florida and some of its affiliates have banking relationships with The Bank of New York Mellon and its affiliates. The Bank of New York Mellon or its affiliate also serves as trustee or agent under other indentures and agreements pursuant to which securities of Duke Energy Florida and of some of its affiliates are outstanding.

The holders of not less than a majority in principal amount of the First Mortgage Bonds outstanding have the right to direct the time, method and place of conducting any proceedings for any remedy available to, or conferred by the Mortgage upon, the Mortgage Trustee; provided, however, that the Mortgage Trustee may, if it determines in good faith that such direction would involve the Mortgage Trustee in personal liability or be unjustly prejudicial to the rights of the non-assenting bondholders, decline to follow such direction. The Mortgage Trustee will not be liable for any action that it takes or omits to take in good faith in accordance with any such direction.

Table of Contents

CERTAIN U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS

The following discussion summarizes certain U.S. federal income tax considerations relevant to the acquisition, ownership and disposition of the Mortgage Bonds, and does not purport to be a complete analysis of all potential U.S. federal income tax considerations. This discussion only applies to Mortgage Bonds that are held as capital assets, within the meaning of section 1221 of the Internal Revenue Code of 1986, as amended (the "Code"), and that are purchased in the initial offering at the initial offering price by Non-U.S. Holders (as defined below).

This summary is based on the Code, administrative pronouncements, judicial decisions and regulations of the Treasury Department, changes to any of which subsequent to the date of this prospectus supplement may affect the tax consequences described herein. This discussion does not describe all of the U.S. federal income tax considerations that may be relevant to Non-U.S. Holders in light of their particular circumstances or to Non-U.S. Holders subject to special rules, such as certain financial institutions, tax-exempt organizations, insurance companies, certain accrual method taxpayers subject to special tax accounting rules as a result of their use of financial statements under Section 451(b) of the Code, traders or dealers in securities or commodities, persons holding Mortgage Bonds as part of a hedge or other integrated transaction or certain former citizens or residents of the United States. This discussion does not address any U.S. federal income tax consequences for U.S. taxpayers who purchase Mortgage Bonds. Persons considering the purchase of Mortgage Bonds are urged to consult their tax advisors with regard to the application of the U.S. federal income tax laws to their particular situations as well as any tax consequences arising under the laws of any state, local or foreign taxing jurisdiction. Furthermore, this discussion does not describe the effect of U.S. federal estate and gift tax laws or the effect of any applicable foreign, state or local laws.

We have not and will not seek any rulings or opinions from the Internal Revenue Service (the "IRS") with respect to the matters discussed below. There can be no assurance that the IRS will not take a different position concerning the tax consequences of the acquisition, ownership or disposition of the Mortgage Bonds or that any such position would not be sustained.

Prospective investors should consult their own tax advisors with regard to the application of the U.S. federal income tax considerations discussed below to their particular situations as well as the application of any state, local, foreign or other tax laws, including gift and estate tax laws.

For purposes of this summary, a "Non-U.S. Holder" means a beneficial owner of a Mortgage Bond that, for U.S. federal income tax purposes, is not (i) an individual that is a citizen or resident of the United States; (ii) a corporation or other entity treated as a corporation for U.S. federal income tax purposes that is created or organized under the laws of the United States, any state thereof or the District of Columbia; (iii) an estate the income of which is subject to U.S. federal income taxation regardless of its source; or (iv) a trust if (A) a court within the United States is able to exercise primary supervision over its administration and one or more United States persons (as defined in the Code) have the authority to control all substantial decisions of such trust, or (B) the trust has made an election under the applicable Treasury regulations to be treated as a United States person.

If a partnership, or other entity or arrangement treated as a partnership for U.S. federal income tax purposes, holds Mortgage Bonds, the tax treatment of a partner in such a partnership will generally depend upon the status of the partner and the activities of the partnership. Partners in a partnership holding Mortgage Bonds should consult their tax advisor as to the particular U.S. federal income tax considerations relevant to the acquisition, ownership and disposition of the Mortgage Bonds applicable to them.

S-14

Table of Contents

Interest

It is anticipated, and this discussion assumes, that the Mortgage Bonds will not be issued with more than a de minimis amount of original issue discount. Except if interest on the Mortgage Bonds is effectively connected with the conduct by a Non-U.S. Holder of a trade or business within the United States, and subject to the FATCA discussion below, a Non-U.S. Holder generally will not be subject to U.S. federal income or withholding tax on payments of interest on the Mortgage Bonds provided that such Non-U.S. Holder (A) does not directly or indirectly, actually or constructively, own 10% or more of the total combined voting power of all classes of our stock entitled to vote, (B) is not a controlled foreign corporation that is related to us directly or constructively through stock ownership, (C) is not a bank receiving such interest on an extension of credit made pursuant to a loan agreement entered into in the ordinary course of its trade or business, and (D) satisfies certain certification requirements. Such certification requirements will be met if (x) the Non-U.S. Holder provides its name and address, and certifies on an IRS Form W-8BEN or IRS Form W-8BEN-E (or a substantially similar form), under penalties of perjury, that it is not a United States person or (y) a securities clearing organization or certain other financial institutions holding the Mortgage Bonds on behalf of the Non-U.S. Holder certifies on IRS Form W-8IMY, under penalties of perjury, that such certification has been received by it and furnishes us or our paying agent with a copy thereof. In addition, we or our paying agent must not have actual knowledge or reason to know that the beneficial owner of the Mortgage Bonds is a United States person.

If interest on the Mortgage Bonds is not effectively connected with the conduct by the Non-U.S. Holder of a trade or business within the United States, but such Non-U.S. Holder does not satisfy the other requirements outlined in the preceding paragraph, interest on the Mortgage Bonds generally will be subject to U.S. withholding tax at a 30% rate (or a lower applicable treaty rate).

If interest on the Mortgage Bonds is effectively connected with the conduct by a Non-U.S. Holder of a trade or business within the United States, and, if certain tax treaties apply, is attributable to a permanent establishment or fixed base within the United States, the Non-U.S. Holder generally will be subject to U.S. federal income tax on a net income basis at the rate applicable to United States persons generally (and, with respect to corporate holders, may also be subject to a 30% branch profits tax or a lower applicable treaty branch profits tax rate). If interest on the Mortgage Bonds is effectively connected with the conduct by a Non-U.S. Holder of a trade or business within the United States, such interest payments will not be subject to U.S. withholding tax so long as the Non-U.S. Holder provides us or our paying agent with the appropriate documentation (generally an IRS Form W-8ECI).

Sale or Other Taxable Disposition of the Mortgage Bonds

Subject to the FATCA discussion below, a Non-U.S. Holder generally will not be subject to U.S. federal withholding tax with respect to gain, if any, recognized on the sale or other taxable disposition of the Mortgage Bonds. A Non-U.S. Holder will also generally not be subject to U.S. federal income tax with respect to such gain, unless (i) the gain is effectively connected with the conduct by such Non-U.S. Holder of a trade or business within the United States, and, if certain tax treaties apply, is attributable to a permanent establishment or fixed base within the United States, or (ii) in the case of a Non-U.S. Holder that is a nonresident alien individual, such Non-U.S. Holder is present in the United States for 183 or more days in the taxable year of the disposition and certain other conditions are satisfied. In the case described in (i) above, gain or loss recognized on the disposition of such Mortgage Bonds generally will be subject to U.S. federal income taxation in the same manner as if such gain or loss were recognized by a United States person, and, in the case of a Non-U.S. Holder that is a foreign corporation, may also be subject to the branch profits tax at a rate of 30% (or a lower applicable treaty branch profits tax rate). In the case described in (ii) above, the Non-U.S. Holder will be subject to a 30% tax (or a lower applicable treaty rate) on any capital gain recognized on the disposition of the Mortgage Bonds (after being offset by certain U.S. source capital losses).

S-15

Table of Contents

Information Reporting and Backup Withholding

Information returns will be filed annually with the IRS in connection with payments we make on the Mortgage Bonds. Copies of these information returns may also be made available under the provisions of a specific tax treaty or other agreement to the tax authorities of the country in which the Non-U.S. Holder resides. Unless the Non-U.S. Holder complies with certification procedures to establish that it is not a United States person, information returns may be filed with the IRS in connection with the proceeds from a sale or other disposition of the Mortgage Bonds, and the Non-U.S. Holder may be subject to backup withholding (currently at a rate of 24%) on payments on the Mortgage Bonds or on the proceeds from a sale or other disposition of the Mortgage Bonds. The certification procedures required to claim the exemption from withholding on interest described above will satisfy the certification requirements necessary to avoid the backup withholding as well. The amount of any backup withholding from a payment to a Non-U.S. Holder generally will be allowed as a credit against the Non-U.S. Holder's U.S. federal income tax liability and may entitle the Non-U.S. Holder to a refund, provided that the required information is furnished to the IRS in a timely manner.

Foreign Account Tax Compliance Act

Under the Foreign Account Tax Compliance Act and related IRS guidance ("FATCA"), a 30% U.S. withholding tax is imposed on certain payments (which currently includes interest payments on the Mortgage Bonds and will include gross proceeds, including the return of principal, from the sale or other disposition, including redemptions, of the Mortgage Bonds beginning January 1, 2019) made to a non-United States entity that fails to take required steps to provide information regarding its "United States accounts" or its direct or indirect "substantial United States owners," as applicable, or to make a required certification that it has no such accounts or owners. We will not be obligated to make any "gross up" or additional payments in respect of amounts withheld on the Mortgage Bonds if we determine that we must so withhold in order to comply with FATCA in respect of the amounts described above. Prospective investors should consult their own tax advisors regarding FATCA and whether it may be relevant to the ownership and disposition of the Mortgage Bonds.

S-16

Table of Contents

BOOK-ENTRY SYSTEM

We have obtained the information in this section concerning DTC and its book-entry system and procedures from sources that we believe to be reliable, but we take no responsibility for the accuracy of this information.

Each series of the Mortgage Bonds initially will be represented by one or more fully registered global securities. Each global security will be deposited with, or on behalf of, DTC or any successor thereto and registered in the name of Cede & Co., DTC's nominee.

Investors may elect to hold interests in each global security through either DTC in the United States or Clearstream or the Euroclear System in

Europe if they are participants of such systems, or indirectly through organizations which are participants in such systems. Clearstream and the Euroclear System will hold interests on behalf of their participants through customers' securities accounts in Clearstream's and the Euroclear System's names on the books of their respective depositaries, which in turn will hold such interests in customers' securities accounts in the depositaries' names on the books of DTC. Citibank, N.A. will act as depositary for Clearstream and JPMorgan Chase Bank, N.A. will act as depositary for the Euroclear System (in such capacities, the "U.S. Depositaries").

You may hold your interests in a global security in the United States through DTC, either as a participant in such system or indirectly through organizations which are participants in such system. So long as DTC or its nominee is the registered owner of the global securities representing the Mortgage Bonds, DTC or such nominee will be considered the sole owner and holder of the Mortgage Bonds for all purposes of the Mortgage Bonds and the Mortgage. Except as provided below, owners of beneficial interests in the Mortgage Bonds will not be entitled to have the Mortgage Bonds registered in their names, will not receive or be entitled to receive physical delivery of the Mortgage Bonds in definitive form and will not be considered the owners or holders of the Mortgage Bonds under the Mortgage, including for purposes of receiving any reports that we or the Mortgage Trustee deliver pursuant to the Mortgage. Accordingly, each person owning a beneficial interest in a Mortgage Bond must rely on the procedures of DTC or its nominee and, if such person is not a participant, on the procedures of the participant through which such person owns its interest, in order to exercise any rights of a holder of Mortgage Bonds.

- you will not be entitled to receive physical delivery of a certificate representing your interest in the Mortgage Bonds;
- all references in this prospectus supplement or in the accompanying prospectus to actions by holders will refer to actions taken by DTC upon instructions from its direct participants; and
- all references in this prospectus supplement or the accompanying prospectus to payments and notices to holders will refer to payments and notices to DTC or Cede & Co., as the registered holder of the Mortgage Bonds, for distribution to you in accordance with DTC procedures.

The Depository Trust Company

DTC will act as securities depositary for the Mortgage Bonds. The Mortgage Bonds will be issued as fully registered securities registered in the name of Cede & Co. DTC is:

- a limited-purpose trust company organized under the New York Banking Law;
- a "banking organization" within the meaning of the New York Banking Law;
- a member of the Federal Reserve System;

S-17

Table of Contents

- a "clearing corporation" within the meaning of the New York Uniform Commercial Code; and
- a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934, as amended.

DTC holds securities that its direct participants deposit with DTC. DTC also facilitates the post-trade settlement among direct participants of sales and other securities transactions, in deposited securities through electronic computerized book-entry transfers and pledges between direct participants' accounts, thereby eliminating the need for physical movement of securities certificates.

Direct participants include securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to indirect participants such as securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a direct participant, either directly or indirectly. The rules applicable to DTC and its participants are on file with the SEC. More information about DTC can be found at www.dtcc.com. The contents of such website do not constitute part of this prospectus supplement.

If you are not a direct participant or an indirect participant and you wish to purchase, sell or otherwise transfer ownership of, or other interests in the Mortgage Bonds, you must do so through a direct participant or an indirect participant. DTC agrees with and represents to DTC participants that it will administer its book-entry system in accordance with its rules and by-laws and requirements of law. The SEC has on file a set of the rules applicable

to DTC and its direct participants.

Purchases of the Mortgage Bonds under DTC's system must be made by or through direct participants, which will receive a credit for the Mortgage Bonds on DTC's records. The ownership interest of each beneficial owner is in turn to be recorded on the records of direct participants and indirect participants. Beneficial owners will not receive written confirmation from DTC of their purchase, but beneficial owners are expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the direct or indirect participants through which such beneficial owners entered into the transaction. Transfers of ownership interests in the Mortgage Bonds are to be accomplished by entries made on the books of direct and indirect participants acting on behalf of beneficial owners. Beneficial owners will not receive physical delivery of certificates representing their ownership interests in the Mortgage Bonds, except as provided below in "—Certificated Mortgage Bonds."

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

Conveyance of notices and other communications by DTC to direct participants, by direct participants to indirect participants and by direct and indirect participants to beneficial owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

S-18

Table of Contents

Book-Entry Format

Under the book-entry format, the Mortgage Trustee will pay interest and principal payments to Cede & Co., as nominee of DTC. DTC will forward the payment to the direct participants, who will then forward the payment to the indirect participants or to the beneficial owners. You may experience some delay in receiving your payments under this system.

DTC is required to make book-entry transfers on behalf of its direct participants and is required to receive and transmit payments of principal, premium, if any, and interest on the Mortgage Bonds. Any direct participant or indirect participant with which you have an account is similarly required to make book-entry transfers and to receive and transmit payments with respect to Mortgage Bonds on your behalf. We and the Mortgage Trustee have no responsibility or liability for any aspect of the records relating to or payments made on account of beneficial ownership interests in the Mortgage Bonds or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

The Mortgage Trustee will not recognize you as a holder of any Mortgage Bonds under the Mortgage and you can only exercise the rights of a holder indirectly through DTC and its direct participants. DTC has advised us that it will only take action regarding a Mortgage Bond if one or more of the direct participants to whom the Mortgage Bond is credited direct DTC to take such action. DTC can only act on behalf of its direct participants. Your ability to pledge Mortgage Bonds to indirect participants, and to take other actions, may be limited because you will not possess a physical certificate that represents your Mortgage Bonds.

Certificated Mortgage Bonds

Unless and until they are exchanged, in whole or in part, for Mortgage Bonds in definitive form in accordance with the terms of the Mortgage Bonds, the Mortgage Bonds may not be transferred except as a whole by DTC to a nominee of DTC; as a whole by a nominee of DTC to DTC or another nominee of DTC; or as a whole by DTC or a nominee of DTC to a successor of DTC or a nominee of such successor.

We will issue Mortgage Bonds to you or your nominees, in fully certificated registered form, rather than to DTC or its nominees, only if:

- DTC notifies us that it is unwilling or unable to continue as depositary or DTC is no longer a registered clearing agency under the Securities Exchange Act of 1934, as amended, and we are unable to appoint a qualified successor within 90 days;
- an event of default has occurred and is continuing with respect to the Mortgage Bonds; or
- we, at our option, and subject to DTC's procedures, elect to effect an exchange of global securities for Mortgage Bonds issued to you or your nominees.

If any of the above events occurs, DTC is required to notify all direct participants that Mortgage Bonds in fully certificated registered form are available through DTC. DTC will then surrender each global security representing the Mortgage Bonds along with instructions for re-registration. The Mortgage Trustee will re-issue the Mortgage Bonds in fully certificated registered form and will recognize the registered holders of the certificated Mortgage Bonds as holders under the Mortgage.

Global Clearance and Settlement Procedures

Initial settlement for the Mortgage Bonds will be made in immediately available funds. Secondary market trading between DTC participants will occur in the ordinary way in accordance with DTC rules and will be settled in immediately available funds using DTC's Same-Day Funds Settlement System. Secondary market trading between Clearstream participants and/or Euroclear System participants will

Table of Contents

occur in the ordinary way in accordance with the applicable rules and operating procedures of Clearstream and the Euroclear System, as applicable.

Cross-market transfers between persons holding directly or indirectly through DTC on the one hand, and directly or indirectly through Clearstream participants or Euroclear System participants on the other, will be effected through DTC in accordance with DTC rules on behalf of the relevant European international clearing system by its U.S. Depositary; however, such cross-market transactions will require delivery of instructions to the relevant European international clearing system by the counterparty in such system in accordance with its rules and procedures and within its established deadlines (European time). The relevant European international clearing system will, if the transaction meets its settlement requirements, deliver instructions to its U.S. Depositary to take action to effect final settlement on its behalf by delivering or receiving securities in DTC, and making or receiving payment in accordance with normal procedures for same-day funds settlement applicable to DTC. Clearstream participants and Euroclear System participants may not deliver instructions directly to their respective U.S. Depositaries.

Because of time-zone differences, credits of Mortgage Bonds received in Clearstream or the Euroclear System as a result of a transaction with a DTC participant will be made during subsequent securities settlement processing and dated the business day following the DTC settlement date. Such credits or any transactions in such Mortgage Bonds settled during such processing will be reported to the relevant Euroclear System Participant or Clearstream participant on such business day. Cash received in Clearstream or the Euroclear System as a result of sales of the Mortgage Bonds by or through a Clearstream participant or a Euroclear System participant to a DTC participant will be received with value on the DTC settlement date but will be available in the relevant Clearstream or the Euroclear System cash account only as of the business day following settlement in DTC.

Although DTC, Clearstream and the Euroclear System have agreed to the foregoing procedures in order to facilitate transfers of Mortgage Bonds among participants of DTC, Clearstream and the Euroclear System, they are under no obligation to perform or continue to perform such procedures and such procedures may be discontinued or changed at any time.

S-20

Table of Contents

UNDERWRITING (CONFLICTS OF INTEREST)

We have entered into an underwriting agreement with respect to the Mortgage Bonds with the underwriters listed below for whom Barclays Capital Inc., BNP Paribas Securities Corp., PNC Capital Markets LLC, SMBC Nikko Securities America, Inc. and SunTrust Robinson Humphrey, Inc. are acting as representatives. Subject to certain conditions, each of the underwriters has severally agreed to purchase the principal amount of Mortgage Bonds indicated in the following table:

Name	 Principal mount of 2028 lortgage Bonds	 Principal mount of 2048 lortgage Bonds
Barclays Capital Inc.	\$ 90,000,000	\$ 60,000,000
BNP Paribas Securities Corp.	90,000,000	60,000,000
PNC Capital Markets LLC	90,000,000	60,000,000
SMBC Nikko Securities America, Inc.	90,000,000	60,000,000
SunTrust Robinson Humphrey, Inc.	90,000,000	60,000,000
Loop Capital Markets LLC	66,000,000	44,000,000
BB&T Capital Markets, a division of BB&T Securities, LLC	19,500,000	13,000,000
BNY Mellon Capital Markets, LLC	19,500,000	13,000,000
Santander Investment Securities Inc.	19,500,000	13,000,000
The Williams Capital Group, L.P.	19,500,000	13,000,000
CastleOak Securities, L.P.	3,000,000	2,000,000
Samuel A. Ramirez & Company, Inc.	 3,000,000	2,000,000
Total	\$ 600,000,000	\$ 400,000,000

The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the Mortgage Bonds are

subject to certain conditions, including the receipt of legal opinions relating to certain matters. The underwriters must purchase all of the 2028 Mortgage Bonds or the 2048 Mortgage Bonds, respectively, if they purchase any of the 2028 Mortgage Bonds or the 2048 Mortgage Bonds. However, the sales of the 2028 Mortgage Bonds and the 2048 Mortgage Bonds are not conditioned upon each other, and we may consummate the sale of one series and not the other, or consummate the sales at different times. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the nondefaulting underwriters may be increased or the underwriting agreement may be terminated.

We have agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act of 1933, as amended, or to contribute to payments the underwriters may be required to make in respect of any of these liabilities.

The underwriters are offering the Mortgage Bonds subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel, including the validity of the Mortgage Bonds, and other conditions contained in the underwriting agreement, such as the receipt by the underwriters of officers' certificates and legal opinions. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Commissions and Discounts

The Mortgage Bonds sold by the underwriters to the public will initially be offered at the prices to public set forth on the cover of this prospectus supplement and may be offered to certain dealers at these prices less a concession not in excess of (i) 0.400% of the principal amount of the 2028 Mortgage Bonds or (ii) 0.500% of the principal amount of the 2048 Mortgage Bonds. The underwriters may allow, and those dealers may reallow, a discount not in excess of (i) 0.250% of the principal amount of

S-21

Table of Contents

the 2028 Mortgage Bonds or (ii) 0.250% of the principal amount of the 2048 Mortgage Bonds to certain other dealers. If all the Mortgage Bonds are not sold at the prices to public, the underwriters may change the prices to public and the other selling terms.

The expenses of the offerings, not including the respective underwriting discounts, are estimated to be approximately \$900,000. The underwriters have agreed to make a payment to us in an amount equal to \$1,700,000, including in respect of expenses incurred by us in connection with the offerings.

Settlement

It is expected that delivery of the Mortgage Bonds will be made against payment for the Mortgage Bonds on or about the date specified on the cover page of this prospectus supplement, which is the third business day following the date of this prospectus supplement (such settlement cycle being referred to as "T+3"). Under Rule 15c6-1 under the Securities Exchange Act of 1934, as amended, trades in the secondary market generally are required to settle in two business days unless the parties to any such trade expressly agree otherwise. Accordingly, purchasers who wish to trade the Mortgage Bonds on the date of this prospectus supplement will be required, by virtue of the fact that the Mortgage Bonds initially will settle in T+3, to specify an alternative settlement cycle at the time of any such trade to prevent a failed settlement. Purchasers of the Mortgage Bonds who wish to trade the Mortgage Bonds on the date of this prospectus supplement should consult their own advisors.

New Issues of Mortgage Bonds

Each series of the Mortgage Bonds is a new issue of securities with no established trading market. The Mortgage Bonds will not be listed on any securities exchange or included in any automated quotation system. We have been advised by the underwriters that the underwriters intend to make a market in each series of the Mortgage Bonds, but they are not obligated to do so and may discontinue market-making at any time without notice. No assurance can be given as to the liquidity of any trading markets for the Mortgage Bonds.

Price Stabilization and Short Positions

In connection with the offerings, the underwriters may engage in transactions that stabilize, maintain, or otherwise affect the prices of the Mortgage Bonds. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater aggregate principal amount of each series of the Mortgage Bonds than they are required to purchase in the offerings. Stabilizing transactions consist of certain bids or purchases made for the purpose of preventing or retarding a decline in the market price of each series of the Mortgage Bonds while the offerings are in process.

These activities by the underwriters may stabilize, maintain or otherwise affect the market prices of the Mortgage Bonds. As a result, the price of each series of the Mortgage Bonds may be higher than the price that otherwise might exist in the open market. If these activities are commenced, they may be discontinued by the underwriters at any time. These transactions may be effected in the over-the-counter market or otherwise.

Other Relationships

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include, among other activities, securities trading and underwriting, commercial and investment banking, financial advisory, corporate trust, investment management, investment research, principal investment, hedging, financing and brokerage activities. In the ordinary course of their respective businesses, some of the underwriters and/or their affiliates have in the past and may in the future provide us and our affiliates with commercial banking, investment banking,

Table of Contents

financial advisory and other services for which they have received and in the future will receive customary fees.

In addition, in the ordinary course of their business activities, the underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates.

Certain of the underwriters or their affiliates have a lending relationship with us and our affiliates. Certain of those underwriters or their affiliates routinely hedge, and certain other of those underwriters or their affiliates may hedge, their credit exposure to us and our affiliates consistent with their customary risk management policies. Typically, such underwriters and their affiliates would hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities, including potentially the Mortgage Bonds offered hereby. Any such credit default swaps or short positions could adversely affect future trading price of the Mortgage Bonds offered hereby. The underwriters and their respective affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Selling Restrictions

Prohibition of Sales to EEA Retail Investors

The Mortgage Bonds may not be offered, sold or otherwise made available to any retail investor in the EEA. For the purposes of this provision:

- (a) the expression "retail investor" means a person who is one (or more) of the following:
 - (i) a retail client as defined in point (11) of Article 4(1) of MiFID II; or
 - (ii) a customer within the meaning of the Insurance Mediation Directive, where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or
 - (iii) not a qualified investor as defined in the Prospectus Directive; and
- (b) the expression "offer" includes the communication in any form and by any means of sufficient information on the terms of the offer and the Mortgage Bonds to be offered so as to enable an investor to decide to purchase or subscribe for the Mortgage Bonds.

United Kingdom

Any invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) in connection with the issue or sale of the Mortgage Bonds may only be communicated or caused to be communicated in circumstances in which Section 21(1) of the FSMA does not apply to Duke Energy Florida.

All applicable provisions of the FSMA must be complied with in respect to anything done by any person in relation to the Mortgage Bonds in, from or otherwise involving the United Kingdom.

Notice to Prospective Investors in Canada

The Mortgage Bonds may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act* (Ontario), and are permitted clients, as defined in National

S-23

Table of Contents

Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the Mortgage Bonds must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus supplement (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 *Underwriting Conflicts* (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with the offerings.

Notice to Prospective Investors in Switzerland

We have not and will not register with the Swiss Financial Market Supervisory Authority ("FINMA") as a foreign collective investment scheme pursuant to Article 119 of the Federal Act on Collective Investment Scheme of 23 June 2006, as amended ("CISA"), and accordingly the securities being offered pursuant to this prospectus supplement and the accompanying prospectus have not and will not be approved, and may not be licenseable, with FINMA. Therefore, the Mortgage Bonds have not been authorized for distribution by FINMA as a foreign collective investment scheme pursuant to Article 119 CISA and the Mortgage Bonds offered hereby may not be offered to the public (as this term is defined in Article 3 CISA) in or from Switzerland. The Mortgage Bonds may solely be offered to "qualified investors," as this term is defined in Article 10 CISA, and in the circumstances set out in Article 3 of the Ordinance on Collective Investment Scheme of 22 November 2006, as amended ("CISO"), such that there is no public offer. Investors, however, do not benefit from protection under CISA or CISO or supervision by FINMA. This prospectus supplement and the accompanying prospectus and any other materials relating to the Mortgage Bonds are strictly personal and confidential to each offeree and do not constitute an offer to any other person. This prospectus supplement and the accompanying prospectus may only be used by those qualified investors to whom it has been handed out in connection with the offers described herein and may neither directly or indirectly be distributed or made available to any person or entity other than its recipients. It may not be used in connection with any other offer and shall in particular not be copied and/or distributed to the public in Switzerland or from Switzerland. This prospectus supplement and the accompanying prospectus do not constitute an issue prospectus as that term is understood pursuant to Article 652a and/or 1156 of the Swiss Federal Code of Obligations. We have not applied for a listing of the securities on the SIX Swiss Exchange or any other regulated securities market in Switzerland, and consequently, the information presented in this prospectus supplement and the accompanying prospectus does not necessarily comply with the information standards set out in the listing rules of the SIX Swiss Exchange and corresponding prospectus schemes annexed to the listing rules of the SIX Swiss Exchange.

Notice to Prospective Investors in Hong Kong

The Mortgage Bonds have not been offered and will not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32, Laws of Hong Kong), (ii) to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder or (iii) in other circumstances which do not result in the document being a "prospectus" within the meaning of the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32, Laws of Hong Kong) and

S-24

Table of Contents

no advertisement, invitation or document relating to the Mortgage Bonds may be issued or has been or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to Mortgage Bonds which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder.

Notice to Prospective Investors in Japan

The Mortgage Bonds have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) (the "Financial Instruments and Exchange Law"), and the Mortgage Bonds have not been offered or sold and will not be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Law and any other applicable laws, regulations and guidelines promulgated by the relevant Japanese governmental and regulatory authorities and in effect at the relevant time.

Notice to Prospective Investors in Korea

The Mortgage Bonds may not be offered, sold and delivered directly or indirectly, or offered or sold to any person for reoffering or resale, directly or indirectly, in Korea or to any resident of Korea except pursuant to the applicable laws and regulations of Korea, including the Korea Securities and Exchange Act and the Foreign Exchange Transaction Law and the decrees and regulations thereunder. The Mortgage Bonds have not been and will not be registered with the Financial Services Commission of Korea for public offering in Korea. Furthermore, the Mortgage Bonds may not be resold to Korean residents unless the purchaser of the Mortgage Bonds complies with all applicable regulatory requirements (including but not limited to government approval requirements under the Foreign Exchange Transaction Law and its subordinate decrees and regulations) in connection with the purchase of the Mortgage Bonds.

Notice to Prospective Investors in Singapore

This prospectus supplement and the accompanying prospectus have not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus supplement and the accompanying prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the Mortgage Bonds may not be circulated or distributed, nor may the Mortgage Bonds be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor (as defined in Section 4A of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA")) pursuant to Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA or any person pursuant to an offer referred to in Section 275(1A) of the SFA and in accordance with the conditions specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

S-25

Table of Contents

Where the Mortgage Bonds are subscribed or purchased under Section 275 of the SFA by a "relevant person," which is:

- (a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor, shares, debentures and units of shares and debentures of that corporation and the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the Mortgage Bonds pursuant to an offer made under Section 275 of the SFA except:
 - to an institutional investor, a relevant person (as defined in Section 275(2) of the SFA), or any person pursuant to an offer referred to in Section 275(1A) of the SFA (in the case of that corporation) or Section 276(4)(i)(B) of the SFA (in the case of that trust);
 - (ii) where no consideration is or will be given for the transfer; or
 - (iii) where the transfer is by operation of law.

Notice to Prospective Investors in Taiwan

The Mortgage Bonds have not been and will not be registered with the Financial Supervisory Commission of Taiwan, the Republic of China ("Taiwan"), pursuant to relevant securities laws and regulations and may not be offered or sold in Taiwan through a public offering or in any manner which would constitute an offer within the meaning of the Securities and Exchange Act of Taiwan or would otherwise require registration with or the approval of the Financial Supervisory Commission of Taiwan. No person or entity in Taiwan has been authorized to offer, sell, give advice regarding or otherwise intermediate the offering or sale of the Mortgage Bonds in Taiwan.

Conflicts of Interest

A portion of the aggregate net proceeds from the sale of the Mortgage Bonds will be used to repay our commercial paper. See "Use of Proceeds." To the extent any of the underwriters or their affiliates owns some of our commercial paper, such party would receive a portion of the aggregate net proceeds from the sale of the Mortgage Bonds. Accordingly, any such underwriter may have a conflict of interest, in that it has an interest in the offerings beyond the respective underwriting discounts it receives in connection with the offerings.

Table of Contents

LEGAL MATTERS

The validity of the Mortgage Bonds will be passed upon for Duke Energy Florida by Robert T. Lucas III, Esq., Deputy General Counsel of Duke Energy Business Services LLC, the service company affiliate of Duke Energy Florida. Certain legal matters with respect to the offerings of the Mortgage Bonds will be passed upon for Duke Energy Florida by Hunton Andrews Kurth LLP, New York, New York, Sidley Austin LLP, New York, New York, has acted as counsel to the underwriters. Sidley Austin LLP acts and, in the past has acted, as counsel to affiliates of Duke Energy Florida in connection with various matters.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational requirements of the Securities Exchange Act of 1934, as amended, and, in accordance therewith, file annual, quarterly and current reports and other information with the SEC. Such reports and other information can be inspected and copied at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates from the Public Reference Section of the SEC at its Washington, D.C. address. Please call the SEC at 1-800-SEC-0330 for further information. Our filings with the SEC, as well as additional information about us, are also available to the public through Duke Energy Corporation's website at http://www.duke-energy.com and are made available as soon as reasonably practicable after such material is filed with or furnished to the SEC. The information on Duke Energy Corporation's website is not a part of this prospectus supplement or the accompanying prospectus. Our filings are also available to the public through the SEC's website at http://www.sec.gov.

The SEC allows us to "incorporate by reference" into this prospectus supplement the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus supplement, and information that we file later with the SEC will automatically update and supersede this information. This prospectus supplement incorporates by reference the documents incorporated in the accompanying prospectus at the time the registration statement became effective and all later documents filed with the SEC, in all cases as updated and superseded by later filings with the SEC. We incorporate by reference the documents listed below and any future documents filed by us with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, until the offerings are completed:

- Annual Report on Form 10-K for the year ended December 31, 2017;
- Amendment No. 1 to Annual Report on Form 10-K for the year ended December 31, 2017; and
- Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2018.

We, our parent company, Duke Energy Corporation, and certain of its other subsidiaries, separately filed the combined Annual Report on Form 10-K and Quarterly Report on Form 10-Q listed above. We do not intend to incorporate by reference into this prospectus supplement the information relating to Duke Energy Corporation and its subsidiaries (other than Duke Energy Florida, LLC), and we make no representation as to the information relating to Duke Energy Corporation and its subsidiaries (other than Duke Energy Florida, LLC) contained in such combined reports.

We will provide you without charge a copy of these filings, other than any exhibits unless the exhibits are specifically incorporated by reference into this prospectus supplement. You may request a copy by writing us at the following address or telephoning one of the following numbers:

Investor Relations Department Duke Energy Florida, LLC P.O. Box 1005 Charlotte, North Carolina 28201 (704) 382-3853 or (800) 488-3853 (toll-free)

S-27

Prospectus

Duke Energy Florida, LLC

First Mortgage Bonds Debt Securities

From time to time, we may offer the securities described in the prospectus separately or together in any combination, in one or more classes or series, in amounts, at prices and on terms that we will determine at the time of the offering.

We will provide specific terms of these offerings and securities in supplements to this prospectus. You should read carefully this prospectus, the information incorporated by reference in this prospectus and any prospectus supplement before you invest. This prospectus may not be used to offer or

sell any securities unless accompanied by a prospectus supplement.

Investing in our securities involves risks. You should carefully consider the information in the section entitled "Risk Factors" contained in our periodic reports filed with the Securities and Exchange Commission and incorporated by reference into this prospectus before you invest in any of our securities.

We may offer and sell the securities directly, through agents we select from time to time or to or through underwriters or dealers we select. If we use any agents, underwriters or dealers to sell the securities, we will name them and describe their compensation in a prospectus supplement. The price to the public of those securities and the net proceeds we expect to receive from that sale will also be set forth in a prospectus supplement.

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

The date of this prospectus is January 26, 2017.

TABLE OF CONTENTS

Prospectus

	Page
References to Additional Information	i
About this Prospectus	i
Forward-looking Statements	ii
The Company	1
Risk Factors	1
Use of Proceeds	1
Ratio of Earnings to Fixed Charges	2
Description of First Mortgage Bonds	2
Description of Debt Securities	8
Global Securities	19
Plan of Distribution	20
Experts	21
Validity of the Securities	21
Where You Can Find More Information	21

REFERENCES TO ADDITIONAL INFORMATION

This prospectus incorporates important business and financial information about us from other documents that are not included in or delivered with this prospectus. This information is available for you to review at the Securities and Exchange Commission's, or SEC's, public reference room located at 100 F Street, N.E., Room 1580, Washington, DC 20549, and through the SEC's website, *www.sec.gov*. You can also obtain those documents incorporated by reference in this prospectus by requesting them in writing or by telephone from the company at the following address and telephone number:

Investor Relations Department Duke Energy Florida, LLC P.O. Box 1005 Charlotte, North Carolina 28201 (704) 382-3853 or (800) 488-3853 (toll free)

See "Where You Can Find More Information" in this prospectus.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that Duke Energy Florida filed with the SEC utilizing a "shelf" registration process. Under the shelf registration process, we are registering an unspecified amount of First Mortgage Bonds and Debt Securities, and may issue any of such securities in one or more offerings.

This prospectus provides general descriptions of the securities Duke Energy Florida may offer. Each time securities are sold, a prospectus supplement will provide specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. The registration statement filed with the SEC includes exhibits that provide more details about the matters discussed in this

prospectus. You should read this prospectus, the related exhibits filed with the SEC and any prospectus supplement, together with the additional information described under the caption "Where You Can Find More Information."

Unless we have indicated otherwise, or the context otherwise requires, references in this prospectus to "Duke Energy Florida," "we," "us" and "our" or similar terms are to Duke Energy Florida, LLC and its subsidiaries.

i

FORWARD-LOOKING STATEMENTS

This prospectus and the information incorporated by reference in this prospectus include forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements are based on our management's beliefs and assumptions and can often be identified by terms and phrases that include "anticipate," "believe," "intend," "estimate," "expect," "continue," "should," "could," "may," "plan," "project," "predict," "will," "potential," "forecast," "target," "guidance," "outlook," or other similar terminology. Various factors may cause actual results to be materially different than the suggested outcomes within forward-looking statements; accordingly, there is no assurance that such results will be realized.

In light of these risks, uncertainties and assumptions, the events described in the forward-looking statements included or incorporated by reference in this prospectus might not occur or might occur to a different extent or at a different time than described. Forward-looking statements speak only as of the date they are made and we expressly disclaim an obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

ii

THE COMPANY

Duke Energy Florida, an indirect wholly owned subsidiary of Duke Energy Corporation, generates, transmits, distributes and sells electricity in portions of Florida. Our service territory covers approximately 13,000 square miles. We provide electric service, to approximately 1.7 million residential, commercial and industrial customers. As of December 31, 2015, our asset portfolio included approximately 9,101 megawatts of owned generation capacity, 42,400 miles of distribution lines and 5,200 miles of transmission lines.

We are a Florida limited liability company. The address of our principal executive offices is 299 First Avenue North, St. Petersburg, Florida 33701. Our telephone number is (704) 382-3853.

The foregoing information about Duke Energy Florida is only a general summary and is not intended to be comprehensive. For additional information about Duke Energy Florida, you should refer to the information described under the caption "Where You Can Find More Information."

RISK FACTORS

Investing in our securities involves risks. Before purchasing any securities we offer, you should carefully consider the risk factors in our Annual Report on Form 10-K for the year ended December 31, 2015, which has been filed with the SEC and is incorporated by reference in this prospectus, together with all of the other information included in this prospectus and any prospectus supplement and any other information that we have incorporated by reference, including filings made with the SEC subsequent to the date hereof. Any of these risks, as well as other risks and uncertainties, could harm our financial condition, results of operations or cash flows.

USE OF PROCEEDS

Unless stated otherwise in the applicable prospectus supplement, we intend to use the net proceeds from the sale of any offered securities:

- to redeem or purchase from time to time presently outstanding securities when we anticipate those transactions will result in an overall cost savings;
- to repay maturing securities;
- to finance our ongoing construction program; or
- for general company purposes.

RATIO OF EARNINGS TO FIXED CHARGES

The ratios of earnings to fixed charges have been calculated using the Securities and Exchange Commission guidelines.

	Six Months Ended			18 Years Ended December 31,											
	June 30, 2016			2015 2014 (dollars in m								2011			
Earnings as defined for fixed charges calculation															
Add:															
Pretax income from continuing operations	\$	451	\$	943	\$	898	\$	538	\$	413	\$	494			
Fixed charges		99		284		294		285		309		275			
Total earnings	\$	550	\$	1,227	\$	1,192	\$	823	\$	722	\$	769			
Fixed charges:	: :		<u></u>	î	-		-		<u> </u>		-	;			
Interest on debt, including capitalized portions	\$	91	\$	248	\$	252	\$	249	\$	274	\$	253			
Estimate of interest within rental expense		8		36		42		36		35		22			
Total fixed charges	\$	99	\$	284	\$	294	\$	285	\$	309	\$	275			
Ratio of earnings to fixed charges	5 2	5.6	-	4.3	-	4.1	-	2.9		2.3		2.8			

DESCRIPTION OF FIRST MORTGAGE BONDS

General

We will issue First Mortgage Bonds in one or more series under an Indenture, dated as of January 1, 1944, with The Bank of New York Mellon, as successor trustee (the "Mortgage Trustee"), as supplemented by supplemental indentures, including one or more supplemental indentures relating to the First Mortgage Bonds.

In the following discussion, we will refer to the Indenture and all supplements to the Indenture together as the "Mortgage." We will refer to all of our First Mortgage Bonds, including those already issued and those to be issued in the future, as "First Mortgage Bonds."

The information we are providing you in this prospectus concerning the First Mortgage Bonds and the Mortgage is only a summary of the information provided in those documents and the information is qualified in its entirety by reference to the provisions of the Mortgage. You should consult the First Mortgage Bonds themselves, the Mortgage and other documents for more complete information on the First Mortgage Bonds or any particular series thereof. These documents appear as exhibits to the registration statement of which this prospectus is a part, or are incorporated by reference as exhibits to such registration statement, or will appear as exhibits to other documents that we will file with the SEC, which will be incorporated by reference into this prospectus. The Mortgage has been qualified under the Trust Indenture Act of 1939, as amended (the "Trust Indenture Act") and you should refer to the Trust Indenture Act for the provisions that apply to the First Mortgage Bonds. In the summary below, we have included references to applicable section numbers of the Mortgage so that you can more easily locate the relevant provisions.

Provisions of a Particular Series

The First Mortgage Bonds may from time to time, be issued in one or more series. You should consult the prospectus supplement or any free writing prospectus relating to any particular issue of the First Mortgage Bonds for the following information:

• the designation, series and aggregate principal amount of the First Mortgage Bonds;

- the percentage of the principal amount for which we will issue and sell the First Mortgage Bonds;
- the date of maturity for the First Mortgage Bonds;
- the rate at which the First Mortgage Bonds will bear interest or the method of determining that rate;
- the dates on which interest is payable;
- the denominations in which we will authorize the First Mortgage Bonds to be issued, if other than \$1,000 or integral multiples of \$1,000;

- whether we will offer the First Mortgage Bonds in the form of global bonds and, if so, the name of the depositary for any global bonds;
- the terms applicable to any rights to convert First Mortgage Bonds into or exchange them for other of our securities or those of any other entity;
- redemption terms and sinking fund provisions, if any; and
- any other specific terms that do not conflict with the Mortgage.

For more information, see Section 2.01 of the Mortgage.

No series of the First Mortgage Bonds will be limited in aggregate principal amount except as provided in the Mortgage. Unless the applicable prospectus supplement states otherwise, the covenants contained in the Mortgage will not afford holders of the First Mortgage Bonds protection in the event of a change of control or highly leveraged transaction.

Form and Exchanges

Unless otherwise specified in the applicable prospectus supplement, we expect to issue the First Mortgage Bonds as fully registered bonds without coupons in denominations of \$1,000 or any integral multiple of \$1,000. Holders may exchange them, free of charge, for a like aggregate principal amount of other First Mortgage Bonds of different authorized denominations of the same series. Holders may also transfer the First Mortgage Bonds free of charge except for any stamp taxes or other governmental charges that may apply. The First Mortgage Bonds may be presented for transfer or exchange at the corporate trust office of the Trustee in New York, New York. For more information, see Sections 2.01 and 2.03 of the Mortgage.

Interest and Payment

The prospectus supplement for any First Mortgage Bonds will state the interest rate, the method of determination of the interest rate, and the date on which interest is payable. Unless the prospectus supplement states otherwise, principal and interest on First Mortgage Bonds held in (i) definitive or certificated form will be paid at the corporate trust office of the Mortgage Trustee in New York, New York, and (ii) global form will be paid as set forth herein under "Global Securities."

Pursuant to the Mortgage, we will pay interest, to the extent enforceable under law, on any overdue installment of interest on the First Mortgage Bonds at the highest rate of interest payable on any of the First Mortgage Bonds outstanding under the Mortgage. For more information, see Section 2.01 and Article X of the Mortgage.

Redemption and Purchase of First Mortgage Bonds

If the First Mortgage Bonds are redeemable, the redemption terms will appear in the prospectus supplement. We may declare redemptions on at least 30 days' notice to the holders of First Mortgage

3

Bonds to be redeemed and to the Mortgage Trustee. We have agreed that before the redemption date we will deposit with the Mortgage Trustee a sum of money sufficient to redeem the subject First Mortgage Bonds. Our failure to make this required deposit will constitute a completed default under the Mortgage on the specified redemption date and the First Mortgage Bonds called for redemption shall immediately become due and payable. For more information, see Article VIII of the Mortgage.

First Mortgage Bonds are redeemable, in whole but not in part, on not more than 90 days' notice to holders, at a redemption price of 100% of the principal amount thereof, together with accrued interest to the date of redemption, in the event that:

- all of our outstanding common stock is acquired by some governmental body or instrumentality and we elect to redeem all First Mortgage Bonds; or
- all or substantially all the mortgaged and pledged property, constituting bondable property as defined in the Mortgage, that is then subject to the Mortgage as a first lien shall be released from the lien of the Mortgage under the provisions thereof, and available moneys held by the Mortgage Trustee, including any moneys deposited by us for the purpose, are sufficient to redeem all the First Mortgage Bonds at the redemption prices (together with accrued interest to the date of redemption) specified therein applicable to the redemption thereof upon the happening of such event.

For more information, see Section 8.08 of the Mortgage.

Maintenance Fund

The Mortgage provides that the amount expended for property additions (excluding several stated exceptions) will, at the end of each year, equal the minimum provision for depreciation, for each calendar year subsequent to December 31, 1943, and if at the end of any such year we have not expended such required amount, we will, on or before the next succeeding March 31, deposit with the Mortgage Trustee the difference in cash. Certain credits are allowed against cash so required to be deposited. During the three years immediately following a cash deposit with the Mortgage Trustee, we may at any time or from time to time withdraw cash in an amount equal to any available maintenance credit. Cash not so withdrawn shall be applied towards the payment due upon maturity or for the redemption of outstanding First Mortgage Bonds as provided in the Mortgage. For more information, see Sections 5.08 and 1.05 of the Mortgage.

We must provide the Mortgage Trustee with an annual maintenance certificate with respect to the bondable value of property additions.

The minimum provision for depreciation means an amount equal to:

- 15% of our gross operating revenues, net of the cost of electric energy purchased for resale; less
- an amount equal to the aggregate of the charges to operating expense for maintenance; provided, however,
- that the minimum provision for depreciation for any period shall not exceed the maximum provision for depreciation, as defined, for the period.

The maximum provision for depreciation shall mean as to each full calendar year, an amount equal to:

- \$755,000, plus
- 2.25% of the sum of all property additions after January 1, 1944 up to the beginning of the subject calendar year, less

4

• 2.25% of the aggregate amount of all retirements of bondable property during the period after January 1, 1944 up to the beginning of the subject calendar year.

For periods other than a calendar year, the maximum provision for depreciation shall be based upon the maximum provision for depreciation for the calendar year ended during such period multiplied by the number of calendar months or fractions thereof included in such period and divided by 12.

Ranking and Security

The First Mortgage Bonds will be secured by the lien of the Mortgage and will rank equally with all bonds outstanding thereunder. In the opinion of our counsel, the Mortgage constitutes a first mortgage lien, subject only to permitted encumbrances and liens, on substantially all of the fixed properties owned by us except miscellaneous properties specifically excepted. In addition, after-acquired property is covered by the lien of the Mortgage, subject to existing liens at the time such property is acquired. For more information, see the Preambles and Section 2.01 of the Mortgage.

Issuance of Additional First Mortgage Bonds

First Mortgage Bonds may be issued under the Mortgage in a principal amount equal to:

- an amount not exceeding 60% of the bondable value of property additions, which term generally includes all of our tangible property that we are authorized to acquire, own and operate, that has become subject to the Mortgage and which is used in connection with the generation, purchase, transmission, distribution or sale of electricity for light, heat, power or other purposes;
- an additional aggregate principal amount not exceeding the aggregate principal amount of refundable prior lien bonds deposited with the Mortgage Trustee or judicially determined to be invalid;
- an additional aggregate principal amount not exceeding the aggregate principal amount of any outstanding First Mortgage Bonds that have been canceled or delivered for cancellation; and
- an additional aggregate principal amount equal to the amount of cash deposited with the Mortgage Trustee against the issuance of bonds.

For more information, see Sections 4.03 thorough 4.06 of the Mortgage.

First Mortgage Bonds may be authenticated pursuant to the first and fourth bullet points above (and in certain cases pursuant to the second and third bullet points above) only if net earnings for 12 successive months in the 15 months immediately preceding the first day of the month in which application for additional First Mortgage Bonds is made shall be at least two times the annual interest charges on the First Mortgage Bonds and prior

lien bonds outstanding and to be outstanding. For more information, see Sections 4.08 and 1.06 of the Mortgage.

Restriction on Dividends

Unless otherwise stated in the prospectus supplement, in the case of First Mortgage Bonds issued under this prospectus and any accompanying prospectus supplement, and so long as any First Mortgage Bonds are outstanding, we may only pay cash dividends on our common stock, and make any other distribution to Florida Progress, our common stockholder, out of our net income subsequent to December 31, 1943. For more information, see Section 5.24 of the Mortgage. For purposes of the Mortgage, the terms (i) "dividend" shall be interpreted so as to include distributions and (ii) "common stock" shall be interpreted so as to include membership interests.

5

Release and Substitution of Property

Subject to various limitations, property may be released from the lien of the Mortgage when sold or exchanged, upon the basis of:

- cash deposited with the Mortgage Trustee;
- the principal amount of any purchase money obligations pledged with the Mortgage Trustee;
- the fair value of any property additions certified to the Mortgage Trustee and acquired by us in exchange for the property to be released; or
- if non-bondable property is to be released, the fair value of property and certain securities certified to the Mortgage Trustee and acquired by us in exchange for the property to be released, less the principal amount of certain outstanding prior lien bonds.

For more information, see Section 9.03 of the Mortgage.

If all or substantially all of the mortgaged and pledged property constituting bondable property which at the time shall be subject to the lien of the Mortgage as a first lien shall be released, whether pursuant to our request or by eminent domain, then we are required to redeem all the First Mortgage Bonds and have agreed to deposit with the Mortgage Trustee sufficient cash for that purpose. Any new property acquired to take the place of any property released shall be subjected to the lien of the Mortgage. For more information, see Sections 8.08(b), 9.03, 9.05 and 9.11 of the Mortgage.

Modification of Mortgage

The Mortgage may generally be modified with the consent of the holders of not less than 75% in aggregate principal amount of First Mortgage Bonds outstanding which would be affected by the action proposed to be taken, except no such modifications shall:

- extend the maturity of any First Mortgage Bonds, or reduce the interest rate or extend the time of payment thereof, or reduce the principal amount thereof, without the express consent of the holder of each First Mortgage Bond affected;
- reduce the percentage of holders who must consent to the modifications referred to in this section without the consent of the holders of all First Mortgage Bonds outstanding;
- permit the creation of a prior or equal lien on the pledged property; or
- deprive any First Mortgage Bond of the lien of the Mortgage.

For more information, see Section 17.02 of the Mortgage.

Default

In the event of a completed default, the Mortgage Trustee or the holders of at least 25% of the outstanding First Mortgage Bonds may declare the principal of all outstanding First Mortgage Bonds immediately due and payable. The following are defined as completed defaults in the Mortgage:

- default in the payment of principal of, and premium, if any, on any of the First Mortgage Bonds when due and payable, whether at maturity or by declaration, or otherwise;
- default continued for 60 days in the payment of any interest on any of the First Mortgage Bonds;
- default in the payment of principal or interest upon any outstanding prior lien bonds continued beyond any applicable grace period;

certain acts of bankruptcy, insolvency or reorganization; and

6

default continued for 60 days after written notice to us by the Mortgage Trustee (or to us and the Mortgage Trustee by the holders of at least 25% in principal amount of the then outstanding First Mortgage Bonds) in the observance or performance of any other covenant, agreement or condition contained in the Mortgage or in any of the First Mortgage Bonds.

For more information, see Section 10.01 of the Mortgage.

•

If all defaults have been cured, however, the holders of not less than a majority in aggregate principal amount of the First Mortgage Bonds then outstanding may rescind and annul the declaration and its consequences. If the Mortgage Trustee in good faith determines it to be in the interest of the holders of the First Mortgage Bonds, it may withhold notice of default, except in payment of principal, premium, if any, interest or sinking fund payments, if any, for retirement of First Mortgage Bonds. We are required by the Mortgage to report annually to the Mortgage Trustee as to the absence of default and compliance with the provisions of the Mortgage. For more information, see Sections 10.01, 10.02 and 5.23 of the Mortgage.

The holders of not less than a majority in principal amount of the First Mortgage Bonds outstanding have the right to direct the time, method and place of conducting any proceedings for any remedy available to, or conferred by the Mortgage upon, the Mortgage Trustee; provided, however, that the Mortgage Trustee may, if it determines in good faith that such direction would involve the Mortgage Trustee in personal liability or be unjustly prejudicial to the rights of the non-assenting bondholders, decline to follow such direction. For more information, see Section 10.06 of the Mortgage.

Satisfaction and Discharge of the Mortgage

Upon our request, all mortgaged property shall be reconveyed to us, the Mortgage shall be satisfied and discharged, and the lien of the Mortgage released, when:

- we deliver to the Mortgage Trustee for cancellation all First Mortgage Bonds and coupons previously authenticated and not previously cancelled; or;
- all First Mortgage Bonds not previously cancelled or delivered to the Mortgage Trustee for cancellation shall be due and payable within one year, or are to be called for redemption within one year under arrangements satisfactory to the Mortgage Trustee for the giving of notice of redemption, and we have deposited with the Mortgage Trustee cash sufficient to pay at maturity or upon redemption of all of such bonds; and
- we have paid or caused to be paid all other sums payable under the Mortgage.

Evidence to Be Furnished to the Mortgage Trustee Under the Mortgage

Upon any request or application by us to the Mortgage Trustee to take action that is dependent upon our compliance with conditions precedent (including covenant compliance) under the Mortgage, we shall provide to the Mortgage Trustee certificates and opinions required under the Mortgage with respect to compliance with such conditions precedent.

We may demonstrate compliance with Mortgage provisions regarding certificates and opinions by providing written statements to the Mortgage Trustee from our officers or experts we select. For instance, we may select an engineer or appraiser to provide a written statement regarding the value of property being certified or released, or an accountant regarding net earnings, or counsel regarding property titles and compliance with the Mortgage generally. In certain significant matters, applicable law requires that an accountant or engineer must be independent. For more information, see Section 314(d) of the Trust Indenture Act. We must file certificates and other papers each year and whenever certain events occur. Additionally, we must provide evidence from time to time demonstrating our compliance with the conditions and covenants under the Mortgage.

7

Relationship With the Mortgage Trustee

In the normal course of business, the Mortgage Trustee or its affiliates may, from time to time, provide certain commercial banking, investment banking, and securities underwriting services to us and our affiliates. The Mortgage Trustee's affiliate currently serves as Debt Securities Trustee under our Debt Securities Indenture described below.

DESCRIPTION OF DEBT SECURITIES

General

The Debt Securities offered by this prospectus will be our direct unsecured general obligations. This prospectus describes certain general terms of the Debt Securities offered through this prospectus. When we offer to sell a particular series of Debt Securities, we will describe the specific terms of that series in a prospectus supplement. The Debt Securities will be issued under the Indenture (for Debt Securities), dated as of December 7, 2005, between us and The Bank of New York Mellon Trust Company, National Association, as successor trustee, or one or more additional indentures for Debt Securities between us and a trustee elected by us. The Indenture (for Debt Securities) is incorporated by reference into the registration statement of which this prospectus is a part. The form of any additional indenture, between us and a trustee which we will name, under which we may issue Debt Securities is filed as an exhibit to the registration statement. In this prospectus we refer to each of the Indenture (for Debt Securities) and the form of indenture for Debt Securities, as applicable, as the "Debt Securities Indenture." We refer to the trustee under any Debt Securities Indenture as the "Debt Securities Trustee."

The prospectus supplement applicable to a particular series of Debt Securities may state that a particular series of Debt Securities will be our subordinated obligations. The form of Debt Securities Indenture referred to above includes optional provisions (designated by brackets ("[]")) that we would expect to appear in a separate indenture for subordinated debt securities in the event we issue subordinated debt securities. In the following discussion, we refer to any subordinated obligations as the "Subordinated Debt Securities." Unless the applicable prospectus supplement provides otherwise, we will use a separate Debt Securities Indenture for any Subordinated Debt Securities that we may issue. The Indenture (For Debt Securities) dated as of December 7, 2005 has been, and any future Debt Securities Indenture will be, qualified under the Trust Indenture Act and you should refer to the Trust Indenture Act for the provisions that apply to the Debt Securities.

We have summarized selected provisions of the Debt Securities Indenture below. Each Debt Securities Indenture will be independent of any other Debt Securities Indenture unless otherwise stated in a prospectus supplement. The summary that follows is not complete and the summary is qualified in its entirety by reference to the provisions of the applicable Debt Securities Indenture. You should consult the applicable Debt Securities, Debt Securities Indenture, any supplemental indentures, officers' certificates and other related documents for more complete information on the Debt Securities. These documents appear as exhibits to, or are incorporated by reference into, the registration statement of which this prospectus is a part, or will appear as exhibits to other documents that we will file with the SEC, which will be incorporated by reference into this prospectus. In the summary below, we have included references to applicable section numbers of the Debt Securities Indenture so that you can easily locate these provisions.

Ranking

Our Debt Securities that are not designated Subordinated Debt Securities will be effectively subordinated to all of our currently outstanding and future First Mortgage Bonds to the extent of the value of the collateral securing such First Mortgage Bonds. The First Mortgage Bond holders have a first lien on substantially all of our assets. Our Debt Securities that are designated Subordinated Debt

Securities will be subordinate to all of our currently outstanding and future First Mortgage Bonds and Debt Securities that are not designated Subordinated Debt Securities. The Indenture (For Debt Securities) does not limit the amount of First Mortgage Bonds that we may issue.

Provisions of a Particular Series

The Debt Securities may from time to time be issued in one or more series. You should consult the prospectus supplement relating to any particular series of Debt Securities for the following information:

- the title of the Debt Securities;
- any limit on aggregate principal amount of the Debt Securities or the series of which they are a part;
- the date(s), or method for determining the date(s), on which the principal of the Debt Securities will be payable;
- the rate, including the method of determination if applicable, at which the Debt Securities will bear interest, if any, and
 - the date from which any interest will accrue;
 - the dates on which we will pay interest;
 - our ability to defer interest payments and any related restrictions during any interest deferral period; and
 - the record date for any interest payable on any interest payment date;
- the place where

- the principal of, premium, if any, and interest on the Debt Securities will be payable;
- you may register transfer of the Debt Securities;
- you may exchange the Debt Securities; and
- you may serve notices and demands upon us regarding the Debt Securities;
- the security registrar for the Debt Securities and whether the principal of the Debt Securities is payable without presentment or surrender of them;
- the terms and conditions upon which we may elect to redeem any Debt Securities, including any replacement capital or similar covenants limiting our ability to redeem any Subordinated Debt Securities;
- the denominations in which we may issue Debt Securities, if other than \$1,000 and integral multiples of \$1,000;
- the terms and conditions upon which the Debt Securities must be redeemed or purchased due to our obligations pursuant to any sinking fund or other mandatory redemption or tender provisions, or at the holder's option, including any applicable exceptions to notice requirements;
- the currency, if other than United States currency, in which payments on the Debt Securities will be payable;
- the terms according to which elections can be made by us or the holder regarding payments on the Debt Securities in currency other than the currency in which the Debt Securities are stated to be payable;

9

- if payments are to be made on the Debt Securities in securities or other property, the type and amount of the securities and other property or the method by which the amount shall be determined;
- the manner in which we will determine any amounts payable on the Debt Securities that are to be determined with reference to an index or other fact or event ascertainable outside the applicable indenture;
- if other than the entire principal amount, the portion of the principal amount of the Debt Securities payable upon declaration of acceleration of their maturity;
- any addition to the events of default applicable to any Debt Securities and any additions to our covenants for the benefit of the holders of the Debt Securities;
- the terms applicable to any rights to convert Debt Securities into or exchange them for other of our securities or those of any other entity;
- whether we are issuing Debt Securities as global securities, and if so,
 - any limitations on transfer or exchange rights or the right to obtain the registration of transfer;
 - any limitations on the right to obtain definitive certificates for the Debt Securities; and
 - any other matters incidental to the Debt Securities;
- whether we are issuing the Debt Securities as bearer securities;
- any limitations on transfer or exchange of Debt Securities or the right to obtain registration of their transfer, and the terms and amount of any service charge required for registration of transfer or exchange;
- any exceptions to the provisions governing payments due on legal holidays, or any variations in the definition of business day with respect to the Debt Securities;

- any collateral security, assurance, guarantee or other credit enhancement applicable to the Debt Securities; and
- any other terms of the Debt Securities not in conflict with the provisions of the applicable Debt Securities Indenture.

For more information, see Section 301 of the applicable Debt Securities Indenture.

Debt Securities may be sold at a substantial discount below their principal amount. You should consult the applicable prospectus supplement for a description of certain special United States federal income tax considerations that may apply to Debt Securities sold at an original issue discount or denominated in a currency other than dollars.

Unless the applicable prospectus supplement states otherwise, the covenants contained in the applicable indenture will not afford holders of Debt Securities protection in the event we have a change in control or are involved in a highly-leveraged transaction.

Subordination

The applicable prospectus supplement may provide that a series of Debt Securities will be Subordinated Debt Securities, subordinate and junior in right of payment to all of our Senior Indebtedness, as defined below. If so, we will issue these securities under a separate Debt Securities Indenture for Subordinated Debt Securities. For more information, see Article XV of the form of Debt Securities Indenture.

10

Unless the applicable prospectus supplement states otherwise, no payment of principal of, including redemption and sinking fund payments, or any premium or interest on, the Subordinated Debt Securities may be made if:

- there occur certain acts of bankruptcy, insolvency, liquidation, dissolution or other winding up of our company;
- any Senior Indebtedness is not paid when due;
- any applicable grace period with respect to other defaults with respect to any Senior Indebtedness has ended, the default has not been cured or waived and the maturity of such Senior Indebtedness has been accelerated because of the default; or
- the maturity of the Subordinated Debt Securities of any series has been accelerated because of a default and Senior Indebtedness is then outstanding.

Upon any distribution of our assets to creditors upon any dissolution, winding-up, liquidation or reorganization, whether voluntary or involuntary or in bankruptcy, insolvency, receivership or other proceedings, all principal of, and any premium and interest due or to become due on, all outstanding Senior Indebtedness must be paid in full before the holders of the Subordinated Debt Securities are entitled to payment. For more information, see Section 1502 of the applicable Debt Securities Indenture. The rights of the holders of the Subordinated Debt Securities will be subrogated to the rights of the holders of Senior Indebtedness to receive payments or distributions applicable to Senior Indebtedness until all amounts owing on the Subordinated Debt Securities are paid in full. For more information, see Section 1504 of the applicable Debt Securities Indenture.

Unless the applicable prospectus supplement states otherwise, the term "Senior Indebtedness" means:

- all obligations (other than non-recourse obligations and the indebtedness issued under the Subordinated Debt Securities Indenture) of, or guaranteed or assumed by, us:
 - for borrowed money (including both senior and subordinated indebtedness for borrowed money, but excluding the Subordinated Debt Securities);
 - for the payment of money relating to any lease that is capitalized on our consolidated balance sheet in accordance with generally accepted accounting principles; or
 - indebtedness evidenced by bonds, debentures, notes or other similar instruments.

In the case of any such indebtedness or obligations, Senior Indebtedness includes amendments, renewals, extensions, modifications and refundings, whether existing as of the date of the Subordinated Debt Securities Indenture or subsequently incurred by us.

The Subordinated Debt Securities Indenture does not limit the aggregate amount of Senior Indebtedness that we may issue.

Form, Exchange and Transfer

Unless the applicable prospectus supplement states otherwise, we will issue Debt Securities only in fully registered form without coupons and in denominations of \$1,000 and integral multiples of that amount. For more information, see Sections 201 and 302 of the applicable Debt Securities Indenture.

Holders may present Debt Securities for exchange or for registration of transfer, duly endorsed or accompanied by a duly executed instrument of transfer, at the office of the security registrar or at the office of any transfer agent we may designate. Exchanges and transfers are subject to the terms of the applicable indenture and applicable limitations for global securities. We may designate ourselves the security registrar.

11

No charge will be made for any registration of transfer or exchange of Debt Securities, but we may require payment of a sum sufficient to cover any tax or other governmental charge that the holder must pay in connection with the transaction. Any transfer or exchange will become effective upon the security registrar or transfer agent, as the case may be, being satisfied with the documents of title and identity of the person making the request. For more information, see Section 305 of the applicable Debt Securities Indenture.

The applicable prospectus supplement will state the name of any transfer agent, in addition to the security registrar initially designated by us, for any Debt Securities. We may at any time designate additional transfer agents or withdraw the designation of any transfer agent or make a change in the office through which any transfer agent acts. We must, however, maintain a transfer agent in each place of payment for the Debt Securities of each series. For more information, see Section 602 of the applicable Debt Securities Indenture.

We will not be required to:

- issue, register the transfer of, or exchange any Debt Securities or any tranche of any Debt Securities during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any Debt Securities called for redemption and ending at the close of business on the day of mailing; or
 - register the transfer of, or exchange any Debt Securities selected for redemption except the unredeemed portion of any Debt Securities being partially redeemed.

For more information, see Section 305 of the applicable Debt Securities Indenture.

Payment and Paying Agents

Unless the applicable prospectus supplement states otherwise, we will pay interest on a Debt Security on any interest payment date to the person in whose name the Debt Security is registered at the close of business on the regular record date for the interest payment. For more information, see Section 307 of the applicable Debt Securities Indenture.

Unless the applicable prospectus supplement provides otherwise, we will pay principal and any premium and interest on Debt Securities at the office of the paying agent whom we will designate for this purpose. Unless the applicable prospectus supplement states otherwise, the corporate trust office of the Debt Securities Trustee in New York City will be designated as our sole paying agent for payments with respect to Debt Securities of each series. Any other paying agents initially designated by us for the Debt Securities of a particular series will be named in the applicable prospectus supplement. We may at any time add or delete paying agents or change the office through which any paying agent acts. We must, however, maintain a paying agent in each place of payment for the Debt Securities of a particular series. For more information, see Section 602 of the applicable Debt Securities Indenture.

All money we pay to a paying agent for the payment of the principal and any premium or interest on any Debt Security that remains unclaimed at the end of two years after payment is due will be repaid to us. After that date, the holder of that Debt Security shall be deemed an unsecured general creditor and may look only to us for these payments. For more information, see Section 603 of the applicable Debt Securities Indenture.

Redemption

You should consult the applicable prospectus supplement for any terms regarding optional or mandatory redemption of Debt Securities. Except for any provisions in the applicable prospectus supplement regarding Debt Securities redeemable at the holder's option, Debt Securities may be redeemed only upon notice by mail not less than 30 nor more than 60 days prior to the redemption

date. Further, if less than all of the Debt Securities of a series, or any tranche of a series, are to be redeemed, the Debt Securities to be redeemed will be selected by the method provided for the particular series. In the absence of a selection provision, the Debt Securities Trustee will select a fair and appropriate method of selection. For more information, see Sections 403 and 404 of the applicable Debt Securities Indenture.

A notice of redemption we provide may state:

- that redemption is conditioned upon receipt by the paying agent on or before the redemption date of money sufficient to pay the principal of and any premium and interest on the Debt Securities; and
- that if the money has not been received, the notice will be ineffective and we will not be required to redeem the Debt Securities.

For more information, see Section 404 of the applicable Debt Securities Indenture.

Consolidation, Merger and Sale of Assets

We may not consolidate with or merge into any other person, nor may we transfer or lease substantially all of our assets and property to any person, unless:

- the corporation formed by the consolidation or into which we are merged, or the person that acquires by conveyance or transfer, or that leases, substantially all of our property and assets:
 - is organized and validly existing under the laws of any domestic jurisdiction; and
 - expressly assumes by supplemental indenture our obligations on the Debt Securities and under the applicable indentures;
- [•] immediately after giving effect to the transaction, no event of default, and no event that would become an event of default, has occurred and is continuing; and
- we have delivered to the Debt Securities Trustee an officer's certificate and opinion of counsel as provided in the applicable indentures.

For more information, see Section 1101 of the applicable Debt Securities Indenture.

Events of Default

Unless the applicable prospectus supplement states otherwise, "event of default" under the applicable indenture with respect to Debt Securities of any series means any of the following:

- failure to pay any interest due on any Debt Security of that series within 30 days;
- failure to pay principal or premium, if any, when due on any Debt Security of that series;
- failure to make any required sinking fund payment on any Debt Securities of that series;
- breach of or failure to perform any other covenant or warranty in the applicable indenture with respect to Debt Securities of that series for 60 days (subject to extension under certain circumstances for another 120 days) after we receive notice from the Debt Securities Trustee, or we and the Debt Securities Trustee receive notice from the holders of at least 33% in principal amount of the Debt Securities of that series of that series outstanding under the applicable indenture according to the provisions of the applicable indenture;
- certain events of bankruptcy, insolvency or reorganization; and
- any other event of default set forth in the applicable prospectus supplement.

13

For more information, see Section 801 of the applicable Debt Securities Indenture.

An event of default with respect to a particular series of Debt Securities does not necessarily constitute an event of default with respect to the Debt Securities of any other series issued under the applicable indenture.

If an event of default with respect to a particular series of Debt Securities occurs and is continuing, either the Debt Securities Trustee or the holders of at least 33% in principal amount of the outstanding Debt Securities of that series may declare the principal amount of all of the Debt Securities of that series to be due and payable immediately. If the Debt Securities of that series are discount securities or similar Debt Securities, only the portion of the principal amount as specified in the applicable prospectus supplement may be immediately due and payable. If an event of default occurs and is continuing with respect to all series of Debt Securities issued under a Debt Securities Indenture, including all events of default relating to bankruptcy,

insolvency or reorganization, the Debt Securities Trustee or the holders of at least 33% in principal amount of the outstanding Debt Securities of all series issued under that Debt Securities Indenture, considered together, may declare an acceleration of the principal amount of all series of Debt Securities issued under that Debt Securities Indenture. There is no automatic acceleration, even in the event of our bankruptcy or insolvency.

The applicable prospectus supplement may provide, with respect to a series of Debt Securities to which a credit enhancement is applicable, that the provider of the credit enhancement may, if a default has occurred and is continuing with respect to the series, have all or any part of the rights with respect to remedies that would otherwise have been exercisable by the holder of that series.

At any time after a declaration of acceleration with respect to the Debt Securities of a particular series, and before a judgment or decree for payment of the money due has been obtained, the event of default giving rise to the declaration of acceleration will, without further action, be deemed to have been waived, and the declaration and its consequences will be deemed to have been rescinded and annulled, if:

- we have paid or deposited with the Debt Securities Trustee a sum sufficient to pay:
 - all overdue interest on all Debt Securities of the particular series;
 - the principal of and any premium on any Debt Securities of that series that have become due otherwise than by the declaration of acceleration and any interest at the rate prescribed in the Debt Securities;
 - interest upon overdue interest at the rate prescribed in the Debt Securities, to the extent payment is lawful; and
 - all amounts due to the Debt Securities Trustee under the applicable indenture; and
- any other event of default with respect to the Debt Securities of the particular series, other than the failure to pay the principal of the Debt Securities of that series that has become due solely by the declaration of acceleration, has been cured or waived as provided in the applicable indenture.

For more information, see Section 802 of the applicable Debt Securities Indenture.

The applicable Debt Securities Indenture includes provisions as to the duties of the Debt Securities Trustee in case an event of default occurs and is continuing. Consistent with these provisions, the Debt Securities Trustee will be under no obligation to exercise any of its rights or powers at the request or direction of any of the holders unless those holders have offered to the Debt Securities Trustee reasonable indemnity against the costs, expenses and liabilities that may be incurred by it in compliance with such request or direction. For more information, see Section 903 of the applicable Debt Securities Indenture. Subject to these provisions for indemnification, the holders of a majority in

14

principal amount of the outstanding Debt Securities of any series may direct the time, method and place of conducting any proceeding for any remedy available to the Debt Securities Trustee, or exercising any trust or power conferred on the Debt Securities Trustee, with respect to the Debt Securities of that series. For more information, see Section 812 of the applicable Debt Securities Indenture.

No holder of Debt Securities may institute any proceeding regarding the applicable indenture, or for the appointment of a receiver or a trustee, or for any other remedy under the applicable indenture unless:

- the holder has previously given to the Debt Securities Trustee written notice of a continuing event of default of that particular series;
- the holders of a majority in principal amount of the outstanding Debt Securities of all series with respect to which an event of default is continuing have made a written request to the Debt Securities Trustee, and have offered reasonable indemnity to the Debt Securities Trustee, to institute the proceeding as trustee; and
- the Debt Securities Trustee has failed to institute the proceeding, and has not received from the holders of a majority in principal amount of the outstanding Debt Securities of that series a direction inconsistent with the request, within 60 days after notice, request and offer of reasonable indemnity.

For more information, see Section 807 of the applicable Debt Securities Indenture.

The preceding limitations do not apply, however, to a suit instituted by a holder of a Debt Security for the enforcement of payment of the principal of or any premium or interest on the Debt Securities on or after the applicable due date stated in the Debt Securities. For more information, see Section 808 of the applicable Debt Securities Indenture.

We must furnish annually to the Debt Securities Trustee a statement by an appropriate officer as to that officer's knowledge of our compliance with all conditions and covenants under each of the indentures for Debt Securities. Our compliance is to be determined without regard to any grace period or notice requirement under the respective indenture. For more information, see Section 606 of the applicable Debt Securities Indenture.

Modification and Waiver

We and the Debt Securities Trustee, without the consent of the holders of the Debt Securities, may enter into one or more supplemental indentures for any of the following purposes:

- to evidence the assumption by any permitted successor of our covenants in the applicable indenture and the Debt Securities;
- to add one or more covenants or other provisions for the benefit of the holders of outstanding Debt Securities or to surrender any right or power conferred upon us by the applicable indenture;
- to add any additional events of default;
- to change or eliminate any provision of the applicable indenture or add any new provision to it, but if this action would adversely affect the interests of the holders of any particular series of Debt Securities in any material respect, the action will not become effective with respect to that series while any Debt Securities of that series remain outstanding under the applicable indenture;
- to provide collateral security for the Debt Securities;

15

- to establish the form or terms of Debt Securities according to the provisions of the applicable indenture;
- to evidence the acceptance of appointment of a successor Debt Securities Trustee under the applicable indenture with respect to one or more series of the Debt Securities and to add to or change any of the provisions of the applicable indenture as necessary to provide for trust administration under the applicable indenture by more than one trustee;
- to provide for the procedures required to permit the use of a non-certificated system of registration for any series of Debt Securities;
 - to change any place where:
 - the principal of and any premium and interest on any Debt Securities are payable;
 - any Debt Securities may be surrendered for registration of transfer or exchange; or
 - notices and demands to or upon us regarding Debt Securities and the applicable indentures may be served; or
- to cure any ambiguity or inconsistency, but only by means of changes or additions that will not adversely affect the interests of the holders of Debt Securities of any series in any material respect.

For more information, see Section 1201 of the applicable Debt Securities Indenture.

The holders of at least a majority in aggregate principal amount of the outstanding Debt Securities of any series may waive:

- compliance by us with certain provisions of the applicable indenture (see Section 607 of the applicable Debt Securities Indenture); and
- any past default under the applicable indenture, except a default in the payment of principal, premium, or interest and certain covenants and provisions of the applicable indenture that cannot be modified or amended without consent of the holder of each outstanding Debt Security of the series affected (see Section 813 of the applicable Debt Securities Indenture).

The Trust Indenture Act may be amended after the date of the applicable indenture to require changes to the indenture. In this event, the indenture will be deemed to have been amended so as to effect the changes, and we and the Debt Securities Trustee may, without the consent of any holders, enter into one or more supplemental indentures to evidence or effect the amendment. For more information, see Section 1201 of the applicable Debt Securities Indenture.

Except as provided in this section, the consent of the holders of a majority in aggregate principal amount of the outstanding Debt Securities issued

pursuant to a Debt Securities Indenture, considered as one class, is required to change in any manner the applicable indenture pursuant to one or more supplemental indentures. If less than all of the series of Debt Securities outstanding under a Debt Securities Indenture are directly affected by a proposed supplemental indenture, however, only the consent of the holders of a majority in aggregate principal amount of the outstanding Debt Securities of all series directly affected, considered as one class, will be required. Furthermore, if the Debt Securities of any series have been issued in more than one tranche and if the proposed supplemental indenture directly affects the rights of the holders of one or more, but not all, tranches, only the consent of the holders of a majority in aggregate principal amount of the outstanding Debt Securities

16

of all tranches directly affected, considered as one class, will be required. In addition, an amendment or modification:

may not, without the consent of the holder of each outstanding Debt Security affected:

- change the maturity of the principal of, or any installment of principal of or interest on, any Debt Securities;
- reduce the principal amount or the rate of interest, or the amount of any installment of interest, or change the method of calculating the rate of interest;
- reduce any premium payable upon the redemption of the Debt Securities;
- reduce the amount of the principal of any Debt Security originally issued at a discount from the stated principal amount that would be due and payable upon a declaration of acceleration of maturity;
- change the currency or other property in which a Debt Security or premium or interest on a Debt Security is payable; or
- impair the right to institute suit for the enforcement of any payment on or after the stated maturity, or in the case of redemption, on or after the redemption date, of any Debt Securities;
- may not reduce the percentage of principal amount requirement for consent of the holders for any supplemental indenture, or for any waiver of compliance with any provision of or any default under the applicable indenture, or reduce the requirements for quorum or voting, without the consent of the holder of each outstanding Debt Security of each series or tranche affected; and
- may not modify provisions of the applicable indenture relating to supplemental indentures, waivers of certain covenants and waivers of past defaults with respect to the Debt Securities of any series, or any tranche of a series, without the consent of the holder of each outstanding Debt Security affected.

A supplemental indenture will be deemed not to affect the rights under the applicable indenture of the holders of any series or tranche of the Debt Securities if the supplemental indenture:

- changes or eliminates any covenant or other provision of the applicable indenture expressly included solely for the benefit of one or more other particular series of Debt Securities or tranches thereof; or
- modifies the rights of the holders of Debt Securities of any other series or tranches with respect to any covenant or other provision.

For more information, see Section 1202 of the applicable Debt Securities Indenture.

If we solicit from holders of the Debt Securities any type of action, we may at our option by board resolution fix in advance a record date for the determination of the holders entitled to vote on the action. We shall have no obligation, however, to do so. If we fix a record date, the action may be taken before or after the record date, but only the holders of record at the close of business on the record date shall be deemed to be holders for the purposes of determining whether holders of the requisite proportion of the outstanding Debt Securities have authorized the action. For that purpose, the outstanding Debt Securities shall be computed as of the record date. Any holder action shall bind every future holder of the same security and the holder of every security issued upon the registration of transfer of or in exchange for or in lieu of the security in respect of anything done or permitted by the Debt Securities Trustee or us in reliance on that action, whether or not notation of the action is made upon the security. For more information, see Section 104 of the applicable Debt Securities Indenture.

Defeasance

Unless the applicable prospectus supplement provides otherwise, any Debt Security, or portion of the principal amount of a Debt Security, will be deemed to have been paid for purposes of the applicable indenture, and, at our election, our entire indebtedness in respect of the Debt Security, or portion thereof, will be deemed to have been satisfied and discharged, if we have irrevocably deposited with the Debt Securities Trustee or any paying agent other than us, in trust money, certain eligible obligations, as defined in the applicable indenture, or a combination of the two, sufficient to pay principal of and any premium and interest due and to become due on the Debt Security or portion thereof. For more information, see Section 701 of the applicable Debt Securities Indenture. For this purpose, unless the applicable prospectus supplement provides otherwise, eligible obligations include direct obligations of, or obligations unconditionally guaranteed by, the United States, entitled to the benefit of full faith and credit of the United States, and certificates, depositary receipts or other instruments that evidence a direct ownership interest in those obligations or in any specific interest or principal payments due in respect of those obligations.

Resignation, Removal of Debt Securities Trustee; Appointment of Successor

The Debt Securities Trustee may resign at any time by giving written notice to us or may be removed at any time by an action of the holders of a majority in principal amount of outstanding Debt Securities delivered to the Debt Securities Trustee and us. No resignation or removal of the Debt Securities Trustee and no appointment of a successor trustee will become effective until a successor trustee accepts appointment in accordance with the requirements of the applicable indenture. So long as no event of default or event that would become an event of default has occurred and is continuing, and except with respect to a Debt Securities Trustee appointed by an action of the holders, if we have delivered to the Debt Securities Trustee a resolution of our board of directors appointing a successor trustee and the successor trustee has accepted the appointment in accordance with the terms of the applicable indenture, the Debt Securities Trustee will be deemed to have resigned and the successor trustee will be deemed to have been appointed as trustee in accordance with the applicable indenture. For more information, see Section 910 of the applicable Debt Securities Indenture.

Notices

We will give notices to holders of Debt Securities by mail to their addresses as they appear in the Debt Security Register. For more information, see Section 106 of the applicable Debt Securities Indenture.

Title

The Debt Securities Trustee and its agents, and we and our agents, may treat the person in whose name a Debt Security is registered as the absolute owner of that Debt Security, whether or not that Debt Security may be overdue, for the purpose of making payment and for all other purposes. For more information, see Section 308 of the applicable Debt Securities Indenture.

Governing Law

The Debt Securities Indentures and the Debt Securities, including any Subordinated Debt Securities Indentures and Subordinated Debt Securities, will be governed by, and construed in accordance with, the law of the State of New York. For more information, see Section 112 of the applicable Debt Securities Indenture.

Relationship With the Current Trustee or Future Trustees

In the normal course of business, the Trustee under our Indenture (For Debt Securities), dated as of December 7, 2005, or its affiliates provides, and any future trustee or its affiliates may, from time to time, provide certain commercial banking, investment banking, and securities underwriting services to us and our affiliates. The Debt Securities Trustee's affiliate currently serves as Mortgage Trustee under our Mortgage described above.

GLOBAL SECURITIES

We may issue some or all of the First Mortgage Bonds and Debt Securities as book-entry securities. Any such book-entry securities will be represented by one or more fully registered global certificates. We will register each global security with or on behalf of a securities depositary identified in the applicable prospectus supplement. Each global security will be deposited with the securities depositary or its nominee or a custodian for the securities depositary.

As long as the securities depositary or its nominee is the registered holder of a global security representing securities described in this prospectus, that person will be considered the sole owner and holder of the global security and the securities it represents for all purposes. Except in limited circumstances, owners of beneficial interests in a global security:

- may not have the global security or any securities it represents registered in their names;
- may not receive or be entitled to receive physical delivery of certificated securities in exchange for the global security; and
- will not be considered the owners or holders of the global security or any securities it represents for any purposes under the applicable

securities or the related mortgage or indenture.

We will make all payments of principal and any premium and interest on a global security to the securities depositary or its nominee as the holder of the global security. The laws of some jurisdictions require that certain purchasers of securities take physical delivery of securities in definitive form. These laws may impair the ability to transfer beneficial interests in a global security.

Ownership of beneficial interests in a global security will be limited to institutions having accounts with the securities depositary or its nominee, which are called "participants" in this discussion, and to persons that hold beneficial interests through participants. When a global security representing securities described in this prospectus is issued, the securities depositary will credit on its book-entry, registration and transfer system the principal amounts of securities the global security represents to the accounts of its participants. Ownership of beneficial interests in a global security will be shown only on, and the transfer of those ownership interests will be effected only through, records maintained by:

- the securities depositary, with respect to participants' interests; and
- any participant, with respect to interests the participant holds on behalf of other persons.

Payments participants make to owners of beneficial interests held through those participants will be the responsibility of those participants. The securities depositary may from time to time adopt various policies and procedures governing payments, transfers, exchanges and other matters relating to beneficial interests in a global security. None of the following will have any responsibility or liability for any aspect of the securities depositary's or any participant's records relating to beneficial interests in a global security in a global security representing securities described in this prospectus, for payments made on account of those beneficial interests or for maintaining, supervising or reviewing any records relating to those beneficial interests:

- Duke Energy Florida;
- the applicable trustee; or
- any agent of either of them.

19

PLAN OF DISTRIBUTION

We may sell securities to one or more underwriters or dealers for public offering and sale by them, or we may sell the securities to investors directly or through agents. The prospectus supplement relating to the securities being offered will set forth the terms of the offering and the method of distribution and will identify any firms acting as underwriters, dealers or agents in connection with the offering, including:

- the name or names of any underwriters;
- the purchase price of the securities and the proceeds to us from the sale;
- any underwriting discounts and other items constituting underwriters' compensation;
- any public offering price;
- any discounts or concessions allowed or reallowed or paid to dealers; and
- any securities exchange or market on which the securities may be listed.

Only those underwriters identified in the prospectus supplement are deemed to be underwriters in connection with the securities offered in the prospectus supplement.

We may distribute the securities from time to time in one or more transactions at a fixed price or prices, which may be changed, or at prices determined as the prospectus supplement specifies. We may sell securities through forward contracts or similar arrangements. In connection with the sale of securities, underwriters, dealers or agents may be deemed to have received compensation from us in the form of underwriting discounts or commissions and also may receive commissions from securities purchasers for whom they may act as agent. Underwriters may sell the securities to or through dealers, and such dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters or commissions from the purchasers for whom they may act as agent.

We may sell the securities directly or through agents we designate from time to time. Any agent involved in the offer or sale of the securities covered by this prospectus will be named in a prospectus supplement relating to such securities. Commissions payable by us to agents will be set forth in a prospectus supplement relating to the securities being offered. Unless otherwise indicated in a prospectus supplement, any such agents will be

acting on a best-efforts basis for the period of their appointment.

Some of the underwriters, dealers or agents and some of their affiliates who participate in the securities distribution may engage in other transactions with, and perform other services for, us and our subsidiaries or affiliates in the ordinary course of business.

Any underwriting or other compensation which we pay to underwriters or agents in connection with the securities offering, and any discounts, concessions or commissions which underwriters allow to dealers, will be set forth in the applicable prospectus supplement. Underwriters, dealers and agents participating in the securities distribution may be deemed to be underwriters, and any discounts and commissions they receive and any profit they realize on the resale of the securities may be deemed to be underwriting discounts and commissions under the Securities Act of 1933, as amended. Underwriters, and their controlling persons, and agents may be entitled, under agreements we enter into with them, to indemnification against certain civil liabilities, including liabilities under the Securities Act of 1933, as amended.

20

EXPERTS

The consolidated financial statements incorporated in this prospectus by reference from Duke Energy Florida, LLC's Annual Report on Form 10-K have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is incorporated herein by reference. Such consolidated financial statements have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

VALIDITY OF THE SECURITIES

John T. Burnett, Esq., who is Deputy General Counsel of Duke Energy Business Services, LLC, the service company affiliate of Duke Energy Florida, and/or counsel named in the applicable prospectus supplement, will issue an opinion about the validity of the securities we are offering in the applicable prospectus supplement. Counsel named in the applicable prospectus supplement will pass upon certain legal matters on behalf of any underwriters.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational requirements of the Securities Exchange Act of 1934, as amended, and, in accordance therewith, file annual, quarterly and current reports and other information with the Securities and Exchange Commission, or the SEC. Such reports and other information can be inspected and copied at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates from the Public Reference Section of the SEC at its Washington, D.C. address. Please call the SEC at 1-800-SEC-0330 for further information. Our filings with the SEC, as well as additional information about us, are also available to the public through Duke Energy's website at *http://www.duke-energy.com* and are made available as soon as reasonably practicable after such material is filed with or furnished to the SEC. The information on our website is not a part of this prospectus. Our filings are also available to the public through the SEC website at *http://www.sec.gov*.

The SEC allows us to "incorporate by reference" into this prospectus 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 considered to be a part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. This prospectus incorporates by reference the documents incorporated in the prospectus at the time the registration statement became effective and all later documents filed with the SEC, in all cases as updated and superseded by later filings with the SEC. We incorporate by reference the documents listed below and any future documents filed by Duke Energy Florida, LLC with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, until the offering is completed:

- Annual Report on Form 10-K for the year ended December 31, 2015;
- Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2016, and June 30, 2016; and
- Current Reports on Form 8-K filed on June 17, 2016, and June 22, 2016, and September 9, 2016.

We, our parent company, Duke Energy Corporation, and certain of its other subsidiaries separately filed the combined Annual Report on Form 10-K and Quarterly Reports on Form 10-Q listed above. We do not intend to incorporate by reference into this prospectus the information relating to Duke Energy Corporation and its subsidiaries (other than Duke Energy Florida, LLC), and we make no representation as to the information relating to Duke Energy Corporation and its subsidiaries (other than Duke Energy Florida, LLC) contained in such combined reports. We will provide you without charge a copy of these filings, other than any exhibits unless the exhibits are specifically incorporated by reference into this prospectus. You may request a copy by writing us at the following address or telephoning one of the following numbers:

Investor Relations Department Duke Energy Florida, LLC P.O. Box 1005 Charlotte, North Carolina 28201 (704) 382-3853 or (800) 488-3853 (toll-free)

You should rely only on the information contained or incorporated by reference in this prospectus. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not making an offer to sell the securities described in this prospectus in any state where the offer or sale is not permitted. You should assume that the information contained in the prospectus is accurate only as of its date. Our business, financial condition, results of operations and prospects may have changed since that date.

22

Table of Contents

