

State of Florida



# Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD  
TALLAHASSEE, FLORIDA 32399-0850

**-M-E-M-O-R-A-N-D-U-M-**

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**DATE:** January 25, 2018

**TO:** Office of Commission Clerk (Stauffer)

**FROM:** Division of Engineering (Thompson, Ellis, King, Wright) *TE*  
Division of Economics (Higgins) *WBM*  
Office of the General Counsel (Cuello) *Com for Leiby An*

**RE:** Docket No. 20170248-EI – Petition for approval of fuel cost proxy substitution to qualifying facility contract between Duke Energy Florida, LLC and CFR/Biogen (n/k/a Orange Cogeneration Limited Partners), Ridge Generating Station Limited Partnership, Mulberry Energy Company, Inc. (n/k/a Polk Power Partners), and Orlando Cogen Limited, L.P.

**AGENDA:** 02/06/18 – Regular Agenda – Proposed Agency Action - Interested Persons May Participate

**COMMISSIONERS ASSIGNED:** All Commissioners

**PREHEARING OFFICER:** Administrative

**CRITICAL DATES:** Duke is requesting a Consummating Order be filed by April 2018 because they are retiring Crystal River 1 and 2, the Avoided Unit Fuel Reference Plant for the contracts being modified, on this date.

**SPECIAL INSTRUCTIONS:** None

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## Case Background

On July 1, 1991, the Florida Public Service Commission (Commission) approved a petition by Florida Power Corporation n/k/a Duke Energy Florida, LLC (Duke or Utility) requesting approval for cost recovery of negotiated contracts for purchase of firm capacity and energy with the following qualifying facilities: Ridge Generating Station Limited Partnership (Ridge), Mulberry Energy Company, Inc. n/k/a Polk Power Partners (Polk), and Orlando CoGen Limited,

L.P. (Orlando), among others.<sup>1</sup> Similarly, on March 31, 1992, the Commission approved a joint petition by another qualifying facility, CFR-Biogen Corp. n/k/a Orange Cogeneration Limited Partners (Orange), and Duke requesting approval for cost recovery of a negotiated contract for purchase of firm capacity and energy.<sup>2</sup> (These contracts, as amended to date, are collectively referred to as the “QF PPAs”)

Pursuant to the QF PPAs, Duke’s coal-fired units Crystal River 1 and 2 (CR 1 and 2) comprise the avoided unit fuel reference plant that is used to calculate the energy payments for these qualifying facilities. This calculation includes the delivered price of coal burned at CR 1 and 2. However, Duke plans to retire these coal units in April 2018. Upon retirement of these units, the energy payments for these QF PPAs can no longer be calculated as previously called for.

Duke and the owners of the qualifying facilities have negotiated respective amendments to the QF PPAs to agree to substitute the delivered price of coal burned at CR 1 and 2 with a substitute index to act as a fuel cost proxy (Substitute Index), designed to approximate the delivered price of coal burned at CR 1 and 2. Each of the amendments utilizes the Substitute Index, with the index’s development methodology being identical among all amendments. On November 17, 2017, Duke filed a petition for approval of the amendments to the QF PPAs.

The Commission has jurisdiction over this matter pursuant to Sections 366.04 and 366.051, Florida Statutes (F.S.).

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<sup>1</sup>Order No. 24734, issued July 1, 1991, in Docket No. 910401-EQ, *In re: Petition for approval of contracts for purchase of firm capacity and energy by Florida Power Corporation.*

<sup>2</sup>Order No. PSC-92-0129-FOF-EQ, issued March 31, 1992, in Docket No. 900383-EQ, *In re: Complaint by CFR Bio-Gen Corporation against Florida Power Corporation for alleged violation of standard offer contract, and request for determination of substantial interests.*

## Discussion of Issues

**Issue 1:** Should the Commission approve Duke Energy Florida, LLC's petition for approval of the amendments to the negotiated contracts for purchase of firm capacity and energy between Ridge Generating Station Limited Partnership, Mulberry Energy Company, Inc. n/k/a Polk Power Partners, Orlando CoGen Limited, L.P., and CFR-Biogen Corp. n/k/a Orange Cogeneration Limited Partners?

**Recommendation:** Yes. Duke currently plans to retire CR 1 and 2 in April 2018, coal units comprising the avoided unit fuel reference plant as defined in the QF PPAs. The amendments to the QF PPAs seek to substitute the delivered price of coal burned at CR 1 and 2 with the Substitute Index, a fuel cost proxy expected to approximate the delivered price of coal to CR 1 and 2. The remaining total annual payments under the modified QF PPAs are expected to remain approximately equivalent to those estimated prior to modification.

The amendments to the QF PPAs do not modify any other part of the respective contracts. Thus, the core provisions of the QF PPAs, including total energy delivery amounts, contract duration, reliability, security, and risk allocation remain unchanged. Therefore, staff recommends that the Commission approve Duke's petition for approval of the amendments to the QF PPAs. (Wright)

**Staff Analysis:** Duke's petition requests approval of modifications to four existing contracts. The Utility has provided the information required in accordance with Rule 25-17.0836(1), Florida Administrative Code (F.A.C.). As required by Rule 25-17.0836(6), F.A.C., staff evaluated modifications and concessions of the Utility and developer against both the existing contract and the current value of the purchasing Utility's avoided cost.

Three of the four negotiated contracts for the purchase of firm capacity and energy under consideration in this docket were originally approved for cost recovery in 1991, with the fourth contract receiving approval in 1992. Since the original approvals, the Mulberry Energy Company, Inc. contract has been assigned to Polk Power Partners, with the agreement of Duke. Likewise, Duke agreed to the assignment of the contract originally with CFR-Biogen Corp. to Orange Cogeneration Limited Partners. The Ridge and Orlando QF PPAs expire in December 2023. The Polk QF PPA expires in August 2024, while the Orange QF PPA expires in December 2025. For all of the contracts, CR 1 and 2 comprise the avoided unit fuel reference plant. That is, the delivered price of coal burned at CR 1 and 2 is used as a fuel proxy for energy payment calculation purposes of the avoided unit. Duke plans to retire CR 1 and 2 in April 2018. Thus, after this date energy payment calculations could not be calculated pursuant to the terms of the contracts. Duke and the parties to each QF PPA have negotiated respective amendments to the contracts, attached as Attachment A, that seek to substitute the delivered price of coal burned at CR 1 and 2 with the Substitute Index, an index designed to approximate the delivered price of coal burned at CR 1 and 2. Each of the amendments utilizes the Substitute Index, with the index's development methodology being identical among all amendments.

The Substitute Index is designed as a composite index, calculated as the sum of a coal price index and a transportation cost index, unitized in \$/MMBtu. The coal price index is the unweighted monthly average of the weekly SNL Physical Market Survey Prompt Year price for NYMEX Big Sandy River Barge coal in \$/ton published by SNL and converted to \$/MMBtu.

This index was chosen by Duke and the qualifying facilities because the characteristics of the coal, including heat rate and sulfur content, best matched that of the coal burned at CR 1 and 2 and because the index was public, transparent, and had historic values that were readily available. Following selection, the historic values of the coal price index were compared to the actual comprehensive fuel costs of CR 1 and 2 found on Duke's A4 Schedule, System Net Generation and Fuel Cost Report. A variable, yet persistent, difference was identified over the eight years of data reviewed and was calculated to be approximately \$52/ton. This difference was used as the foundation for the transportation cost index used in the Substitute Index. To account for future transportation cost variability, and to arrive at the final transportation cost index, the \$52/ton rate is multiplied by a Rail Cost Adjustment Factor index, which sensitizes the transportation cost to the rate of inflation in railroad inputs such as labor and fuel. Staff finds the Substitute Index is designed in a logical, fair, and robust manner and recognizes its use in the amendments to the QF PPAs as a good faith effort to maintain the cost-effectiveness of the QF PPAs as originally approved by the Commission.

Three years of historic monthly energy prices used to calculate payments to each of the qualifying facilities under current contractual obligations were compared to prices calculated utilizing the Substitute Index as a fuel cost proxy in order to evaluate the potential for future payment deviations. After removal of outliers, payments calculated utilizing the Substitute Index were on average 0.058 \$/MMBtu higher than as-paid fuel prices, representing an average 1.49 percent increase. Duke determined that a 1 percent increase in the value of the Substitute Index would result in a \$0.03/1000 kWh increase to customer bills. In light of this information, the use of the Substitute Index to approximate the delivered price of coal to CR 1 and 2 over the remaining durations of the contracts is expected to result in energy payments that would remain approximately equivalent to those that would have been made had CR 1 and 2 remained in-service. Furthermore, any potential payment deviations from use of the Substitute Index that ultimately reach the customer through cost recovery mechanisms were determined to have minimal impact to ratepayer's bills. Therefore, staff recommends that the amendments to the QF PPAs are cost effective.

While each amendment seeks to modify its respective QF PPA and implement use of the Substitute Index, the language used in each amendment naturally differs as a consequence of the differences in language used in each individual QF PPA. As a result of this, the amendments were also evaluated for their ability to accurately incorporate the Substitute Index as a fuel cost proxy in their respective QF PPA. Those amendments modifying the Orange, Polk, and Orlando contracts were determined to contain appropriate language. The amendment modifying the Ridge contract was found to omit language necessary to identify the use of the Substitute Index as a factor in the calculation of energy payments while simultaneously replacing its predecessor. Duke was notified of this omission and has filed a letter agreement between Duke and Ridge detailing the necessary amendment modifications, attached as Attachment B.

**Conclusion**

Duke currently plans to retire CR 1 and 2 in April 2018, coal units comprising the avoided unit fuel reference plant as defined in the QF PPAs. The amendments to the QF PPAs seek to substitute the delivered price of coal burned at CR 1 and 2 with the Substitute Index, a fuel cost proxy expected to approximate the delivered price of coal to CR 1 and 2. The remaining total annual payments under the modified QF PPAs are expected to remain approximately equivalent to those estimated prior to modification.

The amendments to the QF PPAs do not modify any other part of their respective contracts. Thus, the core provisions of the QF PPAs, including total energy delivery amounts, contract duration, reliability, security, and risk allocation remain unchanged. Therefore, staff recommends that the Commission approve Duke's petition for approval of the amendments to the QF PPAs.

**Issue 2:** Should this docket be closed?

**Recommendation:** Yes. If no person whose substantial interests are affected by the proposed agency action (PAA) files a protest within 21 days of the issuance of the PAA Order, a Consummating Order should be issued and the docket should be closed. (Cuello)

**Staff Analysis:** If no person whose substantial interests are affected by the proposed agency action files a protest within 21 days of the issuance of the PAA Order, a Consummating Order should be issued and the docket should be closed.

**FIRST AMENDMENT TO NEGOTIATED CONTRACT FOR THE PURCHASE OF  
FIRM CAPACITY AND ENERGY FROM A QUALIFYING FACILITY**

**THIS FIRST AMENDMENT TO NEGOTIATED CONTRACT FOR THE PURCHASE OF FIRM CAPACITY AND ENERGY FROM A QUALIFYING FACILITY** (this "Amendment") is entered into as of November 10, 2017 ("Effective Date"), by and between **RIDGE GENERATING STATION, L.P.**, a Florida corporation ("QF" or "Seller"), and **DUKE ENERGY FLORIDA, LLC** ("Company" or "Buyer"), and amends that certain Negotiated Contract For The Purchase Of Firms Capacity And Energy From A Qualifying Facility dated March 8, 1991 (as amended to date, the "Agreement", including as amended by that certain Settlement Agreement and Amendment dated April 19, 1996 ("Settlement")). Initially capitalized terms used and not otherwise defined herein are defined in the Agreement. Seller and Buyer may each individually be referred to as a "Party" or collectively as the "Parties." In the event of a conflict between the Settlement and this Amendment, this Amendment controls.

Notwithstanding anything to the contrary set forth herein, neither this Amendment nor any modification contemplated hereunder will be effective unless and until both parties have executed and delivered this Amendment, and this Amendment is further subject to the Conditions Precedent set forth below.

**WHEREAS**, Buyer plans to permanently retire the Crystal River 1 and Crystal River 2 coal plants in Florida; and

**WHEREAS**, together, Crystal River 1 and Crystal River 2 are the Avoided Unit Fuel Reference Plant used to calculate the "average monthly inventory charge out price" of Section 3(i) in the definition of Coal Price of the Settlement, and without this Amendment, after said permanent retirement, the Coal Price would no longer be calculable in the manner set forth in the Agreement;

**NOW THEREFORE**, in consideration of the promises, mutual covenants and conditions set forth herein in this Amendment, and for good and valuable consideration, the sufficiency of which is acknowledged, and intending to be bound hereby, the parties agree as follows:

- 1. Conditions Precedent.** The Parties agree that the terms and conditions set forth in Section 2 below shall not be effective until Buyer has provided Seller written notice that both of the following have occurred: (a) Buyer has determined in its sole and absolute discretion that Crystal River 1 and Crystal River 2 have been permanently retired and (b) Buyer has received all regulatory approvals/acceptance or waivers that Buyer in its sole discretion determines are appropriate (collectively, the "Conditions Precedent"). Upon

the occurrence of the Conditions Precedent, the terms and conditions set forth in Section 2 will be automatically effective upon written notice to Seller.

2. **Amendment to Section 3 of the Settlement.** Section 3 of the Settlement is replaced in its entirety, subject to the satisfaction of the Conditions Precedent, with "the Fuel Cost", which is made up of a coal cost and a coal transportation cost, as follows:

As of the Fuel Cost Start Date, the "Fuel Cost" shall mean the sum of the SNL Coal Price and the Transportation Cost in \$/MMBtu, rounded to three digits after the decimal point. For the purposes of this Section 3, the capitalized terms shall be defined and other terms and provisions shall apply as follows:

- a. The "Avoided Unit Fuel Reference Plant Shutdown Date" is the date, as determined and noticed by Buyer in its sole and absolute discretion, that Crystal River 1 and Crystal River 2, the Avoided Unit Fuel Reference Plants, have both been permanently retired.
- b. The "Fuel Cost Start Date" is the first month after the Avoided Unit Fuel Reference Plant Shutdown Date.
- c. "SNL Coal Price" is the unweighted monthly average of the weekly SNL Physical Market Survey Prompt Year coal price for NYMEX Big Sandy River Barge 12,000 Btu/lb heat content, 1.67% lb/MMBtu SO<sub>2</sub> content, in \$/ton published by SNL and converted to \$/MMBtu, rounded to three digits after the decimal point. Example: If the four weekly published Physical Market Survey Prompt Year coal prices for March are \$50/ton, \$50/ton, \$48/ton and \$52/ton. The monthly average is:  $(\$50 + \$50 + \$48 + \$52) / 4 = \$50/\text{ton}$ . The conversion from \$/ton to \$/MMBtu is:  $\$50/\text{ton} * 1,000,000 \text{ Btu/MMBtu} / (12,000 \text{ Btu/lb} * 2,000 \text{ lb/ton}) = \$2.083/\text{MMBtu}$ .
- d. "Transportation Cost" is \$52/ton multiplied by the RCAF Index for the month of calculation, converted to \$/MMBtu, rounded to three digits after the decimal point, using a coal heat content of 12,000 Btu/lb. Example: If the RCAF Index for July 2021 is 0.975, the full calculation would be  $\$52/\text{ton} * 0.975 * 1,000,000 \text{ Btu/MMBtu} / (12,000 \text{ Btu/lb} * 2,000 \text{ lb/ton}) = \$2.113/\text{MMBtu}$ .
- e. The "RCAF Index" shall be determined as follows:



- i. **RCAF (Unadjusted)** is the Rail Cost Adjustment Factor prior to adjustment for productivity, but after forecast error adjustment. The RCAF (Unadjusted) is published during the last month of each quarter by the Association of American Railroads (AAR), after approval by the U.S. Surface Transportation Board, for use during the following quarter. For example, the RCAF (Unadjusted) for the second quarter of the year is published during March for use during April, May and June.

Quarter	Month Published	Months Included
1 <sup>st</sup>	December of Prior Year	January, February, March
2 <sup>nd</sup>	March	April, May, June
3 <sup>rd</sup>	June	July, August, September
4 <sup>th</sup>	September	October, November, December

- ii. **“Initial RCAF (Unadjusted)”** is the RCAF (Unadjusted) at the time of the Fuel Cost Start Date. For example: If the Fuel Cost Start Date is May, 2018, the Initial RCAF (Unadjusted) would be the 2<sup>nd</sup> Quarter RCAF (Unadjusted) value for 2018.
- iii. For any months including and between the Fuel Cost Start Date and the first month of the first whole calendar quarter that follows the calendar quarter containing the Fuel Cost Start Date, the Transportation Cost will be \$52 per ton. For example, if the Fuel Cost Start Date is in February 2018, the Transportation Cost will be \$52/ton for February and March 2018 and the Transportation Cost for April 2018 and the remaining months would be \$52/ton multiplied by the RCAF Index.
- iv. **RCAF Index** for a given month is the RCAF (Unadjusted) for the quarter containing the given month divided by the Initial RCAF (Unadjusted), rounded to three digits after the decimal point. For example, if the Fuel Cost Start Date is May 2018 and the given month is July 2021, the RCAF Index would be calculated as the RCAF (Unadjusted) for 3<sup>rd</sup> quarter of 2021 divided by the RCAF (Unadjusted) for 2<sup>nd</sup> quarter of 2018.
- v. The RCAF (Unadjusted) may be rebased by the AAR in its discretion from time to time in order to reset the value of the RCAF (Unadjusted) to 1.0 for the current quarter in accordance to the requirements of the Staggers Rail Act of 1980 (the “Staggers Act”). In that event, the RCAF (Unadjusted) for the quarter containing Fuel Cost Start Date as published quarterly by the AAR will become the Initial RCAF (Unadjusted) and will be used to

calculate the RCAF Index from that point forward unless and until the published value for the RCAF (Unadjusted) for the quarter containing the Fuel Cost Start Date is rebased and revised again due to the requirements of the Staggers Act. For example, if the Fuel Cost Start Date is May, 2018, the Initial RCAF (Unadjusted) would be the 2<sup>nd</sup> Quarter RCAF (Unadjusted) value for 2018. Looking at the most recent RCAF (Unadjusted) for the Fuel Cost Start Date published by the AAR, the Initial RCAF (Unadjusted) for May 2018 is 0.868. In December 2022 the RCAF (Unadjusted) values are rebased and revised per the Staggers Act and the published RCAF (Unadjusted) value for the 2<sup>nd</sup> Quarter of 2018 is changed to 0.854. As a result, the Initial RCAF (Unadjusted) is changed to 0.854, replacing the previous value of 0.868. The rebased value, 0.854, will be the Initial RCAF (Unadjusted) used to calculate the RCAF Index from that point forward unless and until the published value for the RCAF (Unadjusted) for the 2<sup>nd</sup> Quarter of 2018 is later rebased and revised per the requirements of the Staggers Act.

- f. If any of the data needed to calculate the Fuel Cost is no longer available from the same reports or sources during the term of the Agreement the Parties agree that:
  - i. if the same data is available from another report or source, to use the data from the new report or source.
  - ii. if the same data is not available from another report or source, to negotiate promptly and in good faith for a replacement for the data or calculation. The replacement Fuel Cost calculation should include a Central Appalachian coal price component and a Transportation Cost component. Preferably at least five years of historical data for these components must be available so that the original and replacement Fuel Cost values can be adequately compared. The goal is to match the historical results of the original and replacement Fuel Costs as closely as possible over the most recent 5-year period while taking into account any unusual market variations during that time. If there is no way to calculate the Fuel Cost during these negotiations, the Fuel Cost will remain the same as it was for the last month in which data was still available until the replacement is negotiated.

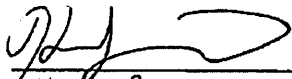
3. **No Further Amendment.** Except as herein amended, all terms and conditions of the Agreement are hereby reaffirmed and shall remain in full force and effect as previously written and shall be construed as one document with this Amendment. This Amendment does not extend the Term of the Agreement.

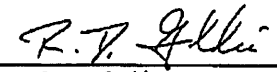
4. **Representations and Warranties.** Each party represents and warrants to the other that:  
(i) it has the capacity, authority and power to execute, deliver, and perform under this Amendment; (ii) this Amendment constitutes legal, valid and binding obligations enforceable against it; (iii) each person who executes this Amendment on its behalf has full and complete authority to do so; (iv) it is acting on its own behalf, has made its own independent decision to enter into this Amendment, has performed its own independent due diligence, is not relying upon the recommendations of any other party, and is capable of understanding, understands, and accepts the provisions of this Amendment; (v) it has completely read, fully understands, and voluntarily accepts every provision hereof; and (vi) it agrees that neither party shall have any provision hereof construed against such party by reason of such party drafting any provision of this document.
  
5. **Counterparts.** This Amendment may be executed in one or more counterparts, each of which will be deemed an original but all of which together shall constitute one and the same agreement.


IN WITNESS THEREOF, the Parties have caused this Amendment to be executed by their duly authorized representatives and the Agreement reaffirmed as of the Amendment Date.

DUKE ENERGY FLORIDA, LLC

RIDGE GENERATING STATION, L.P.

By:   
Name: Harry Sidonis  
Title: State President - FL  
Date: 11/10/17

By:   
Name: Reg Gobbie  
Title: VP Energy Marketing + Trade  
Date: 11/7/17

DUKE ENERGY, INC.  
LEGAL DEPARTMENT  
APPROVED BY:   
DATE: 11/9/17

**SECOND AMENDMENT TO DISPATCHABLE CONTRACT FOR THE PURCHASE  
OF FIRM CAPACITY AND ENERGY FROM A QUALIFYING FACILITY**

**THIS SECOND AMENDMENT TO DISPATCHABLE CONTRACT FOR THE PURCHASE OF FIRM CAPACITY AND ENERGY FROM A QUALIFYING FACILITY** (this "Amendment") is entered into as of November 13, 2017 ("Effective Date"), by and between **ORANGE COGENERATION LIMITED PARTNERSHIP**, a Delaware limited partnership and successor to **CFR BIOGEN**, a Florida corporation ("QF" or "Seller"), and **DUKE ENERGY FLORIDA, LLC** ("Company" or "Buyer"), and amends that certain Dispatchable Contract for the Purchase of Firm Capacity and Energy from a Qualifying Facility dated November 19, 1991 (as amended to date, the "Agreement", including as amended by that certain First Amendment to Dispatchable Contract for the Purchase of Firm Capacity and Energy dated effective as of January 17, 2007). Initially capitalized terms used and not otherwise defined herein are defined in the Agreement. Seller and Buyer may each individually be referred to as a "Party" or collectively as the "Parties."

Notwithstanding anything to the contrary set forth herein, neither this Amendment nor any modification contemplated hereunder will be effective unless and until both Parties have executed and delivered this Amendment, and this Amendment is further subject to the Conditions Precedent set forth below.

**WHEREAS**, Buyer plans to permanently retire the Crystal River 1 and Crystal River 2 coal plants in Florida; and

**WHEREAS**, together, Crystal River 1 and Crystal River 2 are the Avoided Unit Fuel Reference Plant used to calculate the energy payments pursuant to Section 9.1.2 of the Agreement, and without this Amendment, after said permanent retirement, the "average monthly inventory chargeout price of fuel burned at the Avoided Unit Fuel Reference Plant" portion of the energy payments and Firm Energy Cost calculation in Section 9.1.2(i) of the Agreement would no longer be calculable in the manner set forth in the Agreement;

**NOW THEREFORE**, in consideration of the promises, mutual covenants and conditions set forth herein in this Amendment, and for good and valuable consideration, the sufficiency of which is acknowledged, and intending to be bound hereby, the Parties agree as follows:

1. **Conditions Precedent.** Buyer shall promptly provide Seller written notice once both of the following have occurred: (a) Buyer has determined in its sole and absolute discretion that Crystal River 1 and Crystal River 2 have been permanently retired and (b) Buyer has received all regulatory approvals/acceptance or waivers from the Florida Public

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Service Commission that Buyer in its sole discretion determines are appropriate for this Amendment (collectively, the "Conditions Precedent"). The Parties agree that the terms and conditions set forth in Section 2 below shall not be effective until Buyer has provided Seller with such written notice that both of the Conditions Precedent have been satisfied. Upon the occurrence of the Conditions Precedent, the terms and conditions set forth in Section 2 will be automatically effective without further notice.

2. **Amendment to Section 9.1.2(i) of the Agreement.** As of the Fuel Cost Start Date (as herein defined) the phrase "average monthly inventory chargeout price of fuel burned at the Avoided Unit Reference Plant" in Section 9.1.2(i) of the Agreement is replaced, subject to the satisfaction of the Conditions Precedent, with the term "Fuel Cost", which is defined herein and made up of a coal cost and a coal transportation cost, as follows:
  - a. The "Avoided Unit Fuel Reference Plant Shutdown Date" is the date, as determined and noticed by Buyer in connection with Section 1(a) of this Amendment, that Crystal River 1 and Crystal River 2, the Avoided Unit Fuel Reference Plants, have both been permanently retired.
  - b. The "Fuel Cost Start Date" is the first day of the first month after the Avoided Unit Fuel Reference Plant Shutdown Date.
  - c. The "Fuel Cost" is the sum of the SNL Coal Price and the Transportation Cost in \$/MMBtu, rounded to three digits after the decimal point.
  - d. "SNL Coal Price" is the unweighted monthly average of the weekly SNL Physical Market Survey Prompt Year coal price for NYMEX Big Sandy (12,000 Btu/lb heat content, 1.67 lb/MMBtu SO<sub>2</sub> content, barge transport) in \$/ton published by SNL and converted to \$/MMBtu, rounded to three digits after the decimal point. Example: If the month of March has four weekly published Physical Market Survey Prompt Year coal prices (note that there may be more or less than four such published prices during a given month) and the published prices are \$50/ton, \$50/ton, \$48/ton and \$52/ton, then the monthly average for March will be the sum of the published prices divided by the number of prices published during the month:  $(\$50 + \$50 + \$48 + \$52) / 4 = \$50/\text{ton}$ . The conversion from \$/ton to \$/MMBtu is:  $\$50/\text{ton} * 1,000,000 \text{ Btu/MMBtu} / (12,000 \text{ Btu/lb} * 2,000 \text{ lb/ton}) = \$2.083/\text{MMBtu}$ .
  - e. "Transportation Cost" is \$52/ton multiplied by the RCAF Index for the month of calculation, as herein provided, converted to \$/MMBtu, rounded to three digits after the decimal point, using a coal heat content of 12,000 Btu/lb. Example: If the

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RCAF Index for July 2021 is: 0.975, the calculation of the July 2021 Transportation Cost would be  $\$52/\text{ton} \times 0.975 \times 1,000,000 \text{ Btu/MMBtu} / (12,000 \text{ Btu/lb} \times 2,000 \text{ lb/ton}) = \$2.113/\text{MMBtu}$ .

f. The "RCAF Index" shall be determined as follows:

i. **RCAF (Unadjusted)** is the Rail Cost Adjustment Factor prior to adjustment for productivity, but after forecast error adjustment. The RCAF (Unadjusted) is published during the last month of each quarter by the Association of American Railroads (AAR), after approval by the U.S. Surface Transportation Board, for use during the following quarter. For example, the RCAF (Unadjusted) for the second quarter of the year is published during March for use during April, May and June.

Quarter	Month Published	Months Included
1 <sup>st</sup>	December of Prior Year	January, February, March
2 <sup>nd</sup>	March	April, May, June
3 <sup>rd</sup>	June	July, August, September
4 <sup>th</sup>	September	October, November, December

ii. **"Initial RCAF (Unadjusted)"** is the RCAF (Unadjusted) at the time of the Fuel Cost Start Date. For example: If the Fuel Cost Start Date is May 1, 2018, the Initial RCAF (Unadjusted) would be the 2<sup>nd</sup> Quarter RCAF (Unadjusted) value for 2018.

iii. For any months including and between the Fuel Cost Start Date and the first month of the first whole calendar quarter that follows the calendar quarter containing the Fuel Cost Start Date, the Transportation Cost will be \$52 per ton. For example, if the Fuel Cost Start Date is in February 2018, the Transportation Cost will be \$52/ton for February and March 2018, and the Transportation Cost for April 2018 and for each month thereafter, would be \$52/ton multiplied by the RCAF Index for the quarter containing the given month.

iv. **RCAF Index** for a given month is the RCAF (Unadjusted) for the quarter containing the given month divided by the Initial RCAF (Unadjusted), rounded to three digits after the decimal point. For example, if the Fuel Cost Start Date is May 1, 2018 and the given month is July 2021, the

RCAF Index would be calculated as the RCAF (Unadjusted) for 3<sup>rd</sup> quarter of 2021 divided by the RCAF (Unadjusted) for 2<sup>nd</sup> quarter of 2018.

- v. The RCAF (Unadjusted) may be rebased and revised by the AAR in its discretion from time to time in order to reset the value of the RCAF (Unadjusted) to 1.0 for the current quarter in accordance to the requirements of the Staggers Rail Act of 1980 (the "Staggers Act"). In that event, the RCAF (Unadjusted) for the quarter containing Fuel Cost Start Date as published quarterly by the AAR will become the Initial RCAF (Unadjusted) and will be used to calculate the RCAF Index from that point forward unless and until the published value for the RCAF (Unadjusted) for the quarter containing the Fuel Cost Start Date is rebased and revised again due to the requirements of the Staggers Act. For example, if the Fuel Cost Start Date is May, 2018, the Initial RCAF (Unadjusted) would be the 2<sup>nd</sup> Quarter RCAF (Unadjusted) value for 2018. Looking at the most recent RCAF (Unadjusted) for the Fuel Cost Start Date published by the AAR, the Initial RCAF (Unadjusted) for May 2018 is 0.868. In December 2022 the RCAF (Unadjusted) values are rebased and revised per the Staggers Act and the published RCAF (Unadjusted) value for the 2<sup>nd</sup> Quarter of 2018 is changed to 0.854. As a result, the Initial RCAF (Unadjusted) is changed to 0.854, replacing the previous value of 0.868. The rebased value, 0.854, will thereafter be the Initial RCAF (Unadjusted) used to calculate the RCAF Index, unless and until the published value for the RCAF (Unadjusted) for the 2<sup>nd</sup> Quarter of 2018 is later rebased and revised per the requirements of the Staggers Act.
- g. If any of the data needed to calculate the Fuel Cost is no longer available from the same reports or sources during the term of the Agreement the Parties agree that:
  - i. if the same data is available from another report or source, to use the data from the new report or source.
  - ii. if the same data is not available from another report or source, to negotiate promptly and in good faith for a replacement for the data or calculation. The replacement Fuel Cost calculation should include a Central Appalachian coal price component and a Transportation Cost component. Preferably at least five years of historical data for these components must be available so that the original and replacement Fuel Cost values can be adequately compared. The goal is to match the historical results of the original and replacement Fuel Costs as closely as

{H0054832.8}

possible over the most recent 5-year period while taking into account any unusual market variations during that time. If there is no way to calculate the Fuel Cost during these negotiations, the Fuel Cost will remain the same as it was for the last month in which data was still available until the replacement is negotiated.

h. From and after the Fuel Cost Start Date all references in the Agreement to the term "Avoided Unit Fuel Reference Plant," to the extent having been previously used to calculate the "average monthly inventory chargeout price of fuel burned at the Avoided Unit Fuel Reference Plant" shall be of no further force and effect, in order to give effect to the Fuel Cost calculations herein.


3. **No Further Amendment.** Except as herein amended, all terms and conditions of the Agreement are hereby ratified and reaffirmed and shall remain in full force and effect as previously written and shall be construed as one document with this Amendment. This Amendment does not extend the Term of the Agreement.
4. **Representations and Warranties.** Each Party respectively represents and warrants to the other that: (i) it has the capacity, authority and power to execute, deliver, and perform under this Amendment; (ii) this Amendment constitutes legal, valid and binding obligations enforceable against it; (iii) each person who executes this Amendment on its behalf has full and complete authority to do so; (iv) it is acting on its own behalf, has made its own independent decision to enter into this Amendment, has performed its own independent due diligence, is not relying upon the recommendations of any other Party, and is capable of understanding, understands, and accepts the provisions of this Amendment; (v) it has completely read, fully understands, and voluntarily accepts every provision hereof; and (vi) it agrees that neither Party shall have any provision hereof construed against such Party by reason of such Party drafting any provision of this Amendment.
5. **Counterparts.** This Amendment may be executed in one or more counterparts, each of which will be deemed an original but all of which together shall constitute one and the same instrument.

**IN WITNESS THEREOF**, the Parties have caused this Amendment to be executed by their duly authorized representatives on the date(s) of their respective signatures below, to be effective however, subject to the Conditions Precedent herein, as of the Effective Date.


{H0054832 8}

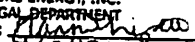


**Duke Energy Florida, LLC**

By:   
Name: Harry Sideris  
Title: State President - FL  
Date: November 10, 2017

**Orange Cogeneration Limited Partnership**  
By: Orange Cogeneration G.P., Inc., as its  
Managing General Partner

By:   
Name: David M. Sims  
Title: General Manager  
Date: November 13, 2017

DUKE ENERGY, INC.  
LEGAL DEPARTMENT  
APPROVED BY:   
DATE: 11/2/17

**SECOND AMENDMENT TO NEGOTIATED CONTRACT FOR THE PURCHASE OF  
FIRM CAPACITY AND ENERGY FROM A QUALIFYING FACILITY**

**THIS SECOND AMENDMENT TO NEGOTIATED CONTRACT FOR THE PURCHASE OF FIRM CAPACITY AND ENERGY FROM A QUALIFYING FACILITY** (this "Amendment") is entered into as of November 13, 2017 ("Effective Date"), by and between **ORLANDO COGEN LIMITED, L.P.**, a Delaware limited partnership ("QF" or "Seller"), and **DUKE ENERGY FLORIDA, LLC** ("Company" or "Buyer"), and amends that certain Negotiated Contract for the Purchase of Firm Capacity and Energy from a Qualifying Facility dated March 13, 1991 (as amended to date, the "Agreement", including as amended by that certain Settlement Agreement and Amendment dated February 3, 1996 ("Settlement")). Initially capitalized terms used and not otherwise defined herein are defined in the Agreement. Seller and Buyer may each individually be referred to as a "Party" or collectively as the "Parties." In the event of a conflict between the Settlement and this Amendment, this Amendment controls.

Notwithstanding anything to the contrary set forth herein, neither this Amendment nor any modification contemplated hereunder will be effective unless and until both Parties have executed and delivered this Amendment, and this Amendment is further subject to the Conditions Precedent set forth below.

**WHEREAS**, Buyer plans to permanently retire the Crystal River 1 and Crystal River 2 coal plants in Florida; and

**WHEREAS**, together, Crystal River 1 and Crystal River 2 are the Avoided Unit Fuel Reference Plant used to calculate the "average monthly inventory charge out price" of Section 1(g)(i) in the definition of Coal Price of the Settlement, and without this Amendment, after said permanent retirement, the Coal Price would no longer be calculable in the manner set forth in the Agreement;

**NOW THEREFORE**, in consideration of the promises, mutual covenants and conditions set forth herein in this Amendment, and for good and valuable consideration, the sufficiency of which is acknowledged, and intending to be bound hereby, the Parties agree as follows:

- 1. Conditions Precedent.** Buyer shall promptly provide Seller written notice once both of the following have occurred: (a) Buyer has determined in its sole and absolute discretion that Crystal River 1 and Crystal River 2 have been permanently retired and (b) Buyer has received all regulatory approvals/acceptance or waivers from the Florida Public Service Commission that Buyer in its sole discretion determines are

{H0054830 11}

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appropriate for this Amendment (collectively, the “Conditions Precedent”). The Parties agree that the terms and conditions set forth in Section 2 below shall not be effective until Buyer has provided Seller with such written notice that both of the Conditions Precedent have been satisfied. Upon the occurrence of the Conditions Precedent, the terms and conditions set forth in Section 2 will be automatically effective without further notice.

2. **Amendments to Section 1(g) of the Settlement.** As of the Fuel Cost Start Date (as herein defined), the phrase “monthly inventory charge out price of coal burned at the Avoided Unit Fuel Reference Plant” in Section 1(g)(i) and the phrase “Avoided Unit Fuel Reference Plant” in the “Provided, however” provision after Section 1(g)(ii) of the Settlement, is replaced with the term “Fuel Cost”, which is defined herein and made up of a coal cost and a coal transportation cost, as follows:
  - a. The “**Avoided Unit Fuel Reference Plant Shutdown Date**” is the date, as determined and noticed by Buyer in connection with Section 1(a) of this Amendment, that Crystal River 1 and Crystal River 2, the Avoided Unit Fuel Reference Plants, have both been permanently retired.
  - b. The “**Fuel Cost Start Date**” is the first day of the first month after the Avoided Unit Fuel Reference Plant Shutdown Date.
  - c. The “**Fuel Cost**” is the sum of the SNL Coal Price and the Transportation Cost in \$/MMBtu, rounded to three digits after the decimal point.
  - d. “**SNL Coal Price**” is the unweighted monthly average of the weekly SNL Physical Market Survey Prompt Year coal price for NYMEX Big Sandy (12,000 Btu/lb heat content, 1.67 lb/MMBtu SO<sub>2</sub> content, barge transport) in \$/ton published by SNL and converted to \$/MMBtu, rounded to three digits after the decimal point. Example: If the month of March has four weekly published Physical Market Survey Prompt Year coal prices (note that there may be more or less than four such published prices during a given month) and the published prices are \$50/ton, \$50/ton, \$48/ton and \$52/ton, then the monthly average for March will be the sum of the published prices divided by the number of prices published during the month:  $(\$50+\$50+\$48+\$52)/4 = \$50/\text{ton}$ . The conversion from \$/ton to \$/MMBtu is:  $\$50/\text{ton} * 1,000,000 \text{ Btu/MMBtu} / (12,000 \text{ Btu/lb} * 2,000 \text{ lb/ton}) = \$2.083/\text{MMBtu}$ .
  - e. “**Transportation Cost**” is \$52/ton multiplied by the RCAF Index for the month of calculation, as herein provided, converted to \$/MMBtu, rounded to three digits

{H0054830 11}

after the decimal point, using a coal heat content of 12,000 Btu/lb. Example: If the RCAF Index for July 2021 is 0.975, the calculation of the July 2021 Transportation Cost would be:  $\$52/\text{ton} \times 0.975 \times 1,000,000 \text{ Btu/MMBtu} / (12,000 \text{ Btu/lb} \times 2,000 \text{ lb/ton}) = \$2.113/\text{MMBtu}$ .

f. The "RCAF Index" shall be determined as follows:

- i. **RCAF (Unadjusted)** is the Rail Cost Adjustment Factor prior to adjustment for productivity, but after forecast error adjustment. The RCAF (Unadjusted) is published during the last month of each quarter by the Association of American Railroads (AAR), after approval by the U.S. Surface Transportation Board, for use during the following quarter. For example, the RCAF (Unadjusted) for the second quarter of the year is published during March for use during April, May and June.

Quarter	Month Published	Months Included
1 <sup>st</sup>	December of Prior Year	January, February, March
2 <sup>nd</sup>	March	April, May, June
3 <sup>rd</sup>	June	July, August, September
4 <sup>th</sup>	September	October, November, December

- ii. **"Initial RCAF (Unadjusted)"** is the RCAF (Unadjusted) at the time of the Fuel Cost Start Date. For example: If the Fuel Cost Start Date is May 1, 2018, the Initial RCAF (Unadjusted) would be the 2<sup>nd</sup> Quarter RCAF (Unadjusted) value for 2018.
- iii. For any months including and between the Fuel Cost Start Date and the first month of the first whole calendar quarter that follows the calendar quarter containing the Fuel Cost Start Date, the Transportation Cost will be \$52 per ton. For example, if the Fuel Cost Start Date is in February 2018, the Transportation Cost will be \$52/ton for February and March 2018, and the Transportation Cost for April 2018 and for each month thereafter, would be \$52/ton multiplied by the RCAF Index for the quarter containing the given month.
- iv. **RCAF Index** for a given month is the RCAF (Unadjusted) for the quarter containing the given month divided by the Initial RCAF (Unadjusted), rounded to three digits after the decimal point. For example, if the Fuel Cost Start Date is May 1, 2018 and the given month is July 2021, the

{H0054830.11}

RCAF Index would be calculated as the RCAF (Unadjusted) for 3<sup>rd</sup> quarter of 2021 divided by the RCAF (Unadjusted) for 2<sup>nd</sup> quarter of 2018.

- v. The RCAF (Unadjusted) may be rebased and revised by the AAR in its discretion from time to time in order to reset the value of the RCAF (Unadjusted) to 1.0 for the current quarter in accordance to the requirements of the Staggers Rail Act of 1980 (the "Staggers Act"). In that event, the RCAF (Unadjusted) for the quarter containing Fuel Cost Start Date as published quarterly by the AAR will become the Initial RCAF (Unadjusted) and will be used to calculate the RCAF Index from that point forward unless and until the published value for the RCAF (Unadjusted) for the quarter containing the Fuel Cost Start Date is rebased and revised again due to the requirements of the Staggers Act. For example, if the Fuel Cost Start Date is May, 2018, the Initial RCAF (Unadjusted) would be the 2<sup>nd</sup> Quarter RCAF (Unadjusted) value for 2018. Looking at the most recent RCAF (Unadjusted) for the Fuel Cost Start Date published by the AAR, the Initial RCAF (Unadjusted) for May 2018 is 0.868. In December 2022 the RCAF (Unadjusted) values are rebased and revised per the Staggers Act and the published RCAF (Unadjusted) value for the 2<sup>nd</sup> Quarter of 2018 is changed to 0.854. As a result, the Initial RCAF (Unadjusted) is changed to 0.854, replacing the previous value of 0.868. The rebased value, 0.854, will thereafter be the Initial RCAF (Unadjusted) used to calculate the RCAF Index, unless and until the published value for the RCAF (Unadjusted) for the 2<sup>nd</sup> Quarter of 2018 is later rebased and revised per the requirements of the Staggers Act.
- g. If any of the data needed to calculate the Fuel Cost is no longer available from the same reports or sources during the term of the Agreement the Parties agree that:
  - i. if the same data is available from another report or source, to use the data from the new report or source.
  - ii. if the same data is not available from another report or source, to negotiate promptly and in good faith for a replacement for the data or calculation. The replacement Fuel Cost calculation should include a Central Appalachian coal price component and a Transportation Cost component. Preferably at least five years of historical data for these components must be available so that the original and replacement Fuel Cost values can be adequately compared. The goal is to match the historical results of the original and replacement Fuel Costs as closely as

{H0054830 11}

possible over the most recent 5-year period while taking into account any unusual market variations during that time. If there is no way to calculate the Fuel Cost during these negotiations, the Fuel Cost will remain the same as it was for the last month in which data was still available until the replacement is negotiated.

- h. From and after the Fuel Cost Start Date all references in the Agreement to the term "Avoided Unit Fuel Reference Plant," to the extent having been previously used to calculate the "average monthly inventory charge out price of coal burned at the Avoided Unit Fuel Reference Plant" shall be of no further force and effect, in order to give effect to the Fuel Cost calculations herein. Notwithstanding the foregoing, in calculating the three month rolling average Fuel Cost under Section 1(g)(i) of the Settlement (as herein amended) for the first two months after the Fuel Cost Start Date, the three month rolling average shall continue to be based, in part, on the "average monthly inventory charge out price of coal burned at the Avoided Unit Fuel Reference Plant" (the "Average Monthly Chargeout Price"). For example, if the Fuel Cost Start Date is March 1, 2018, then the Average Monthly Chargeout Price for the two (2) prior months (January and February 2018) and the Fuel Cost for March 2018 will be used to calculate the three month rolling average. Similarly (using this example), the three month rolling average for April, 2018 would be calculated using the March and April 2018 Fuel Costs and the February 2018 Average Monthly Chargeout Price. Commencing on the third month after the Fuel Cost Start Date, the Average Monthly Chargeout Price shall no longer be used to calculate the three month rolling average.
3. **No Further Amendment.** Except as herein amended, all terms and conditions of the Agreement are hereby ratified and reaffirmed and shall remain in full force and effect as previously written and shall be construed as one document with this Amendment. This Amendment does not extend the Term of the Agreement.
4. **Representations and Warranties.** Each Party respectively represents and warrants to the other that: (i) it has the capacity, authority and power to execute, deliver, and perform under this Amendment; (ii) this Amendment constitutes legal, valid and binding obligations enforceable against it; (iii) each person who executes this Amendment on its behalf has full and complete authority to do so; (iv) it is acting on its own behalf, has made its own independent decision to enter into this Amendment, has performed its own independent due diligence, is not relying upon the recommendations of any other Party, and is capable of understanding, understands, and accepts the provisions of this Amendment; (v) it has completely read, fully understands, and voluntarily accepts every provision hereof; and (vi) it agrees that

{H0054830 11}

neither Party shall have any provision hereof construed against such Party by reason of such Party drafting any provision of this Amendment.


5. **Counterparts.** This Amendment may be executed in one or more counterparts, each of which will be deemed an original but all of which together shall constitute one and the same instrument.


**IN WITNESS THEREOF**, the Parties have caused this Amendment to be executed by their duly authorized representatives on the date(s) of their respective signatures below, to be effective however, subject to the Conditions Precedent herein, as of the Effective Date.

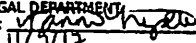
**Duke Energy Florida, LLC**

**Orlando CoGen Limited, L.P.**

By: Orlando CoGen (I), Inc., as its Managing  
General Partner

By:   
Name: Harry Sideris  
Title: State President - FL  
Date: November 10, 2017

By:   
Name: David M. Sims  
Title: General Manager  
Date: November 13, 2017

DUKE ENERGY, INC.  
LEGAL DEPARTMENT  
APPROVED BY:   
DATE: 11/9/17

**SECOND AMENDMENT TO NEGOTIATED CONTRACT FOR THE PURCHASE OF  
FIRM CAPACITY AND ENERGY FROM A QUALIFYING FACILITY**

**THIS SECOND AMENDMENT TO NEGOTIATED CONTRACT FOR THE PURCHASE OF FIRM CAPACITY AND ENERGY FROM A QUALIFYING FACILITY** (this "Amendment") is entered into as of November 13, 2017 ("Effective Date"), by and between **POLK POWER PARTNERS, L.P.**, a Delaware limited Partnership and successor to **MULBERRY ENERGY COMPANY**, a corporation ("QF" or "Seller"), and **DUKE ENERGY FLORIDA, LLC** ("Company" or "Buyer"), and amends that certain Negotiated Contract for the Purchase of Firm Capacity and Energy from a Qualifying Facility dated March 12, 1991 (as amended to date, the "Agreement", including as amended by that certain First Amendment to Negotiated Contract for the Purchase of Firm Capacity and Energy dated effective as of January 17, 2007). Initially capitalized terms used and not otherwise defined herein are defined in the Agreement. Seller and Buyer may each individually be referred to as a "Party" or collectively as the "Parties."

Notwithstanding anything to the contrary set forth herein, neither this Amendment nor any modification contemplated hereunder will be effective unless and until both Parties have executed and delivered this Amendment, and this Amendment is further subject to the Conditions Precedent set forth below.

**WHEREAS**, Buyer plans to permanently retire the Crystal River 1 and Crystal River 2 coal plants in Florida; and

**WHEREAS**, together, Crystal River 1 and Crystal River 2 are the Avoided Unit Fuel Reference Plant used to calculate the energy payments pursuant to Section 9.1.2 of the Agreement, and without this Amendment, after said permanent retirement, the "average monthly inventory chargeout price of fuel burned at the Avoided Unit Fuel Reference Plant" portion of the energy payments and Firm Energy Cost calculation in Section 9.1.2(i) of the Agreement would no longer be calculable in the manner set forth in the Agreement;

**NOW THEREFORE**, in consideration of the promises, mutual covenants and conditions set forth herein in this Amendment, and for good and valuable consideration, the sufficiency of which is acknowledged, and intending to be bound hereby, the Parties agree as follows:

1. **Conditions Precedent.** Buyer shall promptly provide Seller written notice once both of the following have occurred: (a) Buyer has determined in its sole and absolute discretion that Crystal River 1 and Crystal River 2 have been permanently retired and (b) Buyer has received all regulatory approvals/acceptance or waivers from the Florida Public

(H0054831 8)

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Service Commission that Buyer in its sole discretion determines are appropriate for this Amendment (collectively, the "Conditions Precedent"). The Parties agree that the terms and conditions set forth in Section 2 below shall not be effective until Buyer has provided Seller with such written notice that both of the Conditions Precedent have been satisfied. Upon the occurrence of the Conditions Precedent, the terms and conditions set forth in Section 2 will be automatically effective without further notice.

2. **Amendment to Section 9.1.2(i) of the Agreement.** As of the Fuel Cost Start Date (as herein defined), the phrase "average monthly inventory chargeout price of fuel burned at the Avoided Unit Reference Plant" in Section 9.1.2(i) of the Agreement is replaced, subject to the satisfaction of the Conditions Precedent, with the term "Fuel Cost", which is defined herein and made up of a coal cost and a coal transportation cost, as follows:
  - a. The "Avoided Unit Fuel Reference Plant Shutdown Date" is the date, as determined and noticed by Buyer in connection with Section 1(a) of this Amendment, that Crystal River 1 and Crystal River 2, the Avoided Unit Fuel Reference Plants, have both been permanently retired.
  - b. The "Fuel Cost Start Date" is the first day of the first month after the Avoided Unit Fuel Reference Plant Shutdown Date.
  - c. The "Fuel Cost" is the sum of the SNL Coal Price and the Transportation Cost in \$/MMBtu, rounded to three digits after the decimal point.
  - d. "SNL Coal Price" is the unweighted monthly average of the weekly SNL Physical Market Survey Prompt Year coal price for NYMEX Big Sandy (12,000 Btu/lb heat content, 1.67 lb/MMBtu SO<sub>2</sub> content, barge transport) in \$/ton published by SNL and converted to \$/MMBtu, rounded to three digits after the decimal point. Example: If the month of March has four weekly published Physical Market Survey Prompt Year coal prices (note that there may be more or less than four such published prices during a given month) and the published prices are \$50/ton, \$50/ton, \$48/ton and \$52/ton, then the monthly average for March will be the sum of the published prices divided by the number of prices published during the month:  $(\$50+\$50+\$48+\$52)/4=\$50/\text{ton}$ . The conversion from \$/ton to \$/MMBtu is:  $\$50/\text{ton} * 1,000,000 \text{ Btu/MMBtu} / (12,000 \text{ Btu/lb} * 2,000 \text{ lb/ton}) = \$2.083/\text{MMBtu}$ .
  - e. "Transportation Cost" is \$52/ton multiplied by the RCAF Index for the month of calculation, as herein provided, converted to \$/MMBtu, rounded to three digits after the decimal point, using a coal heat content of 12,000 Btu/lb. Example: If the

{H0054831.8}

RCAF Index for July 2021 is: 0.975, the calculation of the July 2021 Transportation Cost would be  $\$52/\text{ton} \times 0.975 \times 1,000,000 \text{ Btu/MMBtu} / (12,000 \text{ Btu/lb} \times 2,000 \text{ lb/ton}) = \$2.113/\text{MMBtu}$ .

f. The "RCAF Index" shall be determined as follows:

i. **RCAF (Unadjusted)** is the Rail Cost Adjustment Factor prior to adjustment for productivity, but after forecast error adjustment. The RCAF (Unadjusted) is published during the last month of each quarter by the Association of American Railroads (AAR), after approval by the U.S. Surface Transportation Board, for use during the following quarter. For example, the RCAF (Unadjusted) for the second quarter of the year is published during March for use during April, May and June.

Quarter	Month Published	Months Included
1 <sup>st</sup>	December of Prior Year	January, February, March
2 <sup>nd</sup>	March	April, May, June
3 <sup>rd</sup>	June	July, August, September
4 <sup>th</sup>	September	October, November, December

ii. "Initial RCAF (Unadjusted)" is the RCAF (Unadjusted) at the time of the Fuel Cost Start Date. For example: If the Fuel Cost Start Date is May 1, 2018, the Initial RCAF (Unadjusted) would be the 2<sup>nd</sup> Quarter RCAF (Unadjusted) value for 2018.

iii. For any months including and between the Fuel Cost Start Date and the first month of the first whole calendar quarter that follows the calendar quarter containing the Fuel Cost Start Date, the Transportation Cost will be \$52 per ton. For example, if the Fuel Cost Start Date is in February 2018, the Transportation Cost will be \$52/ton for February and March 2018, and the Transportation Cost for April 2018 and for each month thereafter, would be \$52/ton multiplied by the RCAF Index for the quarter containing the given month.

iv. **RCAF Index** for a given month is the RCAF (Unadjusted) for the quarter containing the given month divided by the Initial RCAF (Unadjusted), rounded to three digits after the decimal point. For example, if the Fuel Cost Start Date is May 1, 2018 and the given month is July 2021, the

{110054R31.8}

RCAF Index would be calculated as the RCAF (Unadjusted) for 3<sup>rd</sup> quarter of 2021 divided by the RCAF (Unadjusted) for 2<sup>nd</sup> quarter of 2018.

- v. The RCAF (Unadjusted) may be rebased and revised by the AAR in its discretion from time to time in order to reset the value of the RCAF (Unadjusted) to 1.0 for the current quarter in accordance to the requirements of the Staggers Rail Act of 1980 (the "Staggers Act"). In that event, the RCAF (Unadjusted) for the quarter containing Fuel Cost Start Date as published quarterly by the AAR will become the Initial RCAF (Unadjusted) and will be used to calculate the RCAF Index from that point forward unless and until the published value for the RCAF (Unadjusted) for the quarter containing the Fuel Cost Start Date is rebased and revised again due to the requirements of the Staggers Act. For example, if the Fuel Cost Start Date is May, 2018, the Initial RCAF (Unadjusted) would be the 2<sup>nd</sup> Quarter RCAF (Unadjusted) value for 2018. Looking at the most recent RCAF (Unadjusted) for the Fuel Cost Start Date published by the AAR, the Initial RCAF (Unadjusted) for May 2018 is 0.868. In December 2022 the RCAF (Unadjusted) values are rebased and revised per the Staggers Act and the published RCAF (Unadjusted) value for the 2<sup>nd</sup> Quarter of 2018 is changed to 0.854. As a result, the Initial RCAF (Unadjusted) is changed to 0.854, replacing the previous value of 0.868. The rebased value, 0.854, will thereafter be the Initial RCAF (Unadjusted) used to calculate the RCAF Index, unless and until the published value for the RCAF (Unadjusted) for the 2<sup>nd</sup> Quarter of 2018 is later rebased and revised per the requirements of the Staggers Act.
- g. If any of the data needed to calculate the Fuel Cost is no longer available from the same reports or sources during the term of the Agreement the Parties agree that:
  - i. if the same data is available from another report or source, to use the data from the new report or source.
  - ii. if the same data is not available from another report or source, to negotiate promptly and in good faith for a replacement for the data or calculation. The replacement Fuel Cost calculation should include a Central Appalachian coal price component and a Transportation Cost component. Preferably at least five years of historical data for these components must be available so that the original and replacement Fuel Cost values can be adequately compared. The goal is to match the historical results of the original and replacement Fuel Costs as closely as

{H0054831.8}

possible over the most recent 5-year period while taking into account any unusual market variations during that time. If there is no way to calculate the Fuel Cost during these negotiations, the Fuel Cost will remain the same as it was for the last month in which data was still available until the replacement is negotiated.

h. From and after the Fuel Cost Start Date all references in the Agreement to the term "Avoided Unit Fuel Reference Plant," to the extent having been previously used to calculate the "average monthly inventory chargeout price of fuel burned at the Avoided Unit Fuel Reference Plant" shall be of no further force and effect, in order to give effect to the Fuel Cost calculations herein.


3. **No Further Amendment.** Except as herein amended, all terms and conditions of the Agreement are hereby ratified and reaffirmed and shall remain in full force and effect as previously written and shall be construed as one document with this Amendment. This Amendment does not extend the Term of the Agreement.
4. **Representations and Warranties.** Each Party respectively represents and warrants to the other that: (i) it has the capacity, authority and power to execute, deliver, and perform under this Amendment; (ii) this Amendment constitutes legal, valid and binding obligations enforceable against it; (iii) each person who executes this Amendment on its behalf has full and complete authority to do so; (iv) it is acting on its own behalf, has made its own independent decision to enter into this Amendment, has performed its own independent due diligence, is not relying upon the recommendations of any other Party, and is capable of understanding, understands, and accepts the provisions of this Amendment; (v) it has completely read, fully understands, and voluntarily accepts every provision hereof; and (vi) it agrees that neither Party shall have any provision hereof construed against such Party by reason of such Party drafting any provision of this Amendment.
5. **Counterparts.** This Amendment may be executed in one or more counterparts, each of which will be deemed an original but all of which together shall constitute one and the same instrument.


**IN WITNESS THEREOF**, the Parties have caused this Amendment to be executed by their duly authorized representatives on the date(s) of their respective signatures below, to be effective however, subject to the Conditions Precedent herein, as of the Effective Date.

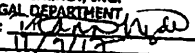
**Duke Energy Florida, LLC**

**Polk Power Partners, L.P.**

By: Polk Power GP, Inc., as its Managing  
General Partner

By:   
Name: Harry Sideris  
Title: State President - FL  
Date: November 10, 2017

By:   
Name: David M. Sims  
Title: General Manager  
Date: November 13, 2017

DUKE ENERGY, INC.  
LEGAL DEPARTMENT  
APPROVED BY:   
DATE: 11/9/17



FILED 1/16/2018  
DOCUMENT NO. 00313-2018  
FPSC - COMMISSION CLERK

Dianne M. Triplett  
DEPUTY GENERAL COUNSEL

January 16, 2018

**VIA ELECTRONIC FILING**

Ms. Carlotta Stauffer, Commission Clerk  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, Florida 32399-0850

Re: Docket No. 20170248-EI - *Duke Energy Florida, LLC's Petition for approval of fuel cost proxy substitution to qualifying facility contracts between CFR/Biogen n/k/a Orange Cogeneration Limited Partners; Ridge Generating Station Limited Partnership; Mulberry Energy Company, Inc. n/k/a Polk Power Partners; Orlando Cogen Limited, L.P; and Duke Energy Florida LLC*

Dear Ms. Stauffer:

Attached for filing on behalf of Duke Energy Florida, LLC ("DEF") is a letter agreement between DEF and Ridge Generating Station, L.P., regarding the First Amendment to Negotiated Contract for the Purchase of Firm Capacity and Energy from a Qualifying Facility. This letter agreement corrects the inadvertent failure to include another change needed to ensure that the intent of the First Amendment is clear.

Thank you for your assistance in this matter. Please feel free to call me at (727) 820-4692 should you have any questions concerning this filing.

Sincerely,

*/s/ Dianne M. Triplett*

Dianne M. Triplett  
Associate General Counsel

DMT/cmK  
Attachment

cc: S. Cuello

299 First Avenue North (33701) • Post Office Box 14042 (33733) • St. Petersburg, Florida  
Phone: 727.820.4692 • Fax: 727.820.5041 • Email: [dianne.triplett@duke-energy.com](mailto:dianne.triplett@duke-energy.com)



January 12, 2018

Mr. Reg Goldie  
Vice President  
Energy Marketing & Sales  
Wheelabrator Technologies  
100 Arboretum Drive, Suite 310  
Portsmouth, NH 03801

Harry Sideris  
State President - Florida

Duke Energy Florida  
299 First Avenue North  
St. Petersburg, FL 33701

harry.sideris@duke-energy.com

Dear Mr. Goldie:

On November 10, 2017, Duke Energy Florida, LLC and Ridge Generating Station, L.P. entered into the First Amendment to Negotiated Contract for the Purchase of Firm Capacity and Energy from a Qualifying Facility ("Amendment"), which made certain amendments to the March 8, 1991 Negotiated Contract, as amended by the April 19, 1996 Settlement.

It has come to our attention that the Amendment inadvertently failed to include another needed change to ensure that the intent of the Amendment is clear. Specifically, the Amendment, in Section 3, deletes the definition "Coal Price" and replaces it with "Fuel Cost." However, in Section 1.23 of the Negotiated Contract, as amended by the Settlement, the definition of "Firm Energy Cost" includes several components, one of which is "Coal Price." Because "Coal Price" is no longer a defined term, the Parties intended to replace "Coal Price" with "Fuel Cost" in Section 1.23 as well.

Please signify your agreement with the above clarification by signing below.

Yours truly,

Harry Sideris  
State President - Florida

Accepted and agreed to by:

Ridge Generating Station, L.P.

Name

Title

Date

R. D. Goldie

VP, Energy Marketing + Sales

1-12-18

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