



**Interoffice Memorandum**

August 14, 2020

**TO:** Mayor Jerry L. Demings  
and Board of County Commissioners

**FROM:** Raymond E. Hanson, P. E., Director  
Utilities Department

A handwritten signature in black ink, appearing to read "R. Hanson", is written over the "FROM:" field.

**SUBJECT: BCC AGENDA ITEM – Consent Agenda  
September 1, 2020 BCC Meeting  
Interconnection Agreement between Duke Energy and Orange  
County for the Northwest Water Reclamation Facility Solar Energy  
System**

**Contact Person: Lindy A. Wolfe, P. E., Manager  
Utilities Engineering Division  
407-254-9918**

Duke Energy requires execution of the Interconnection Agreement to initiate the process of evaluation of proposed energy systems requesting connection to the Duke Energy electric grid.

The Utilities Department is requesting approval of this agreement in reference to the proposed Utilities' Capital Improvements Program Northwest Water Reclamation Facility (NWRP) Solar Energy System project, which proposes an interconnection to the Duke Energy electric grid. This agreement serves as a pre-application to initiate the evaluation of the proposed interconnection. Upon Duke Energy's approval and successful installation of the system, this application and agreement will be revised with As-Built system information.

The NWRP Solar Energy System project proposes the installation of photovoltaic panels capable of producing up to 2 mega watts ( $MW_{AC}$ ) of power, which is expected to offset approximately 50% of the facility's annual power consumption.

The Orange County Attorney's Office staff has reviewed the agreement and finds it acceptable. Utilities Department staff has reviewed the agreement and recommends approval.

**Action Requested: Approval and execution of Interconnection of Customer-Owned Renewable Generation Systems to Duke Energy Florida, Inc. Electric Grid Application and Compliance Form for tier 3 customer-owned renewable generation systems ( $>100kw$ ,  $\leq 2mw$ ) by and between Orange County, Florida and Duke Energy Florida, Inc. for the Northwest Water Reclamation Facility Solar Energy System and delegation of authority to the County Administrator to execute any revised agreement with as-built system information on behalf of Orange County.**

**District 2.**



OFFICE OF COMPTROLLER

ORANGE  
COUNTY  
FLORIDA

Phil Diamond, CPA  
County Comptroller as  
Clerk of the Board of County Commissioners  
201 South Rosalind Avenue  
Post Office Box 38  
Orlando, FL 32802  
Telephone: (407) 836-7300  
Fax: (407) 836-5359

DATE: September 3, 2020

TO: Lindy A. Wolfe, Manager  
Utilities Engineering Division, BCC

FROM: Katie Smith, Deputy Clerk *CAS for KS*  
Comptroller Clerk of BCC

SUBJECT: Request for Execution of Document, Utilities Department Consent Item 5,  
Legislative File 20-1253, September 1, 2020

Enclosed is the Interconnection of Customer-Owned Renewable Generation Systems (3 originals) which was approved by the Board of County Commissioners (BCC) at its regular meeting held on September 1, 2020.

Please forward the document to all required parties for signature.

**Email copies of the fully-executed documents to [ClerkofBCC@occompt.com](mailto:ClerkofBCC@occompt.com) and copy [terese.parsons@ocfl.net](mailto:terese.parsons@ocfl.net).** Note: [ClerkofBCC@occompt.com](mailto:ClerkofBCC@occompt.com) is used only for County staff submission of pending documents.

Please include in cover memo or subject line identification of the document by name, agenda item number, and date of BCC approval. Emailed copies must be in full-size PDF format. The document will be processed and filed for the record upon receipt.

If you are unable to return a copy of the fully-executed document before October 1, 2020, notify Katie Smith by email of the reason for the delay prior to that date.

If you have any questions, please do not hesitate to call.

ks:cas

Enclosures (3)

dl: Ray Hanson, Director, Utilities Department, BCC [email]  
Chris Testerman, Deputy County Administrator, BCC [email]  
Luci Rowe, Executive Assistant, Utilities Department, BCC [email]  
Terese Parsons, Executive Assistant, County Administrator's Office, BCC [email]  
Pending File

BCC Mtg. Date: September 1, 2020



SECTION NO. VII  
THIRD REVISED SHEET NO. 7317  
CANCELS SECOND REVISED SHEET NO. 7.317

INTERCONNECTION OF CUSTOMER-OWNED RENEWABLE GENERATION SYSTEMS  
TO DUKE ENERGY FLORIDA, INC ELECTRIC GRID  
APPLICATION AND COMPLIANCE FORM

FOR TIER 3 CUSTOMER-OWNED RENEWABLE GENERATION SYSTEMS (>100kw, <=2mw)

<b>A. Applicant Information</b>	
Name:	<u>Orange County, Florida</u> DEF Account No.: <u>7189224296</u>
Service Address:	<u>701 W McCormick Rd</u>
City:	<u>Apopka</u> State: <u>FL</u> Zip Code: <u>32703</u>
Mailing Address(If different):	<u>701 W. McCormick, Apopka, FL 32703</u>
Daytime Phone:	<u>407-254-9927</u> Fax: _____ Email: <u>Megan.Nelson@ocfl.net</u>

<b>B. System Information</b>	
Is this part of a Microgrid?	No _____
Primary Energy Source:	<u>Renewable</u>
Energy Source Type:	<u>Solar</u> Prime Mover: _____
Energy Source(other):	_____ Prime Mover(other): _____
System Location:	<u>Orange County NWRf (wastewater plant)</u>
Inverter Location:	<u>West wall Building 2</u>
Insurance Company Name:	<u>Self-insured</u>
Insurance Expiration Date:	<u>06/10/22</u>
Permission to monitor?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is there an additional Meter Base?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Batteries:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Total Battery Capacity kW DC:	<u>None</u>
Manufacturer Name:	_____
Model #:	_____

Solar Inverter 1 Information:

Inverter Manufacturer: Yaskawa Model: PVI60TL

Quantity: 28 Inverter Size kW: 90

Micro Inverter 1 Information:

Micro Inverter Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_

Quantity: \_\_\_\_\_ Micro Inverter Size kW: \_\_\_\_\_

Panel/Module 1 Information:

Panel Manufacturer: Hanwha Model: QCells Q.Peak DUO-G8

Quantity: 6665 Panel Wattage kW: 0.390 Each 2600 kW total

Solar Inverter 2 Information:

Inverter Manufacturer: Canadian Solar Model: CSI-66KTL-GS

Quantity: 28 Inverter Size kW: 90

Micro Inverter 2 Information:

Micro Inverter Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_

Quantity: \_\_\_\_\_ Micro Inverter Size kW: \_\_\_\_\_

Panel/Module 2 Information:

Panel Manufacturer: Canadian Solar Model: CS3W-395

Quantity: 6582 Panel Wattage kW: 0.395 each 2600 kW total

Solar Inverter 3 Information:

Inverter Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_

Quantity: \_\_\_\_\_ Inverter Size kW: \_\_\_\_\_

Micro Inverter 3 Information:

Micro Inverter Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_

Quantity: \_\_\_\_\_ Micro Inverter Size kW: \_\_\_\_\_

**Panel/Module 3 Information:**

Panel Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_

Quantity: \_\_\_\_\_ Panel Wattage kW: \_\_\_\_\_

Total System Capacity kW (DC): 2600.000

**C. Installation Contractor Information**

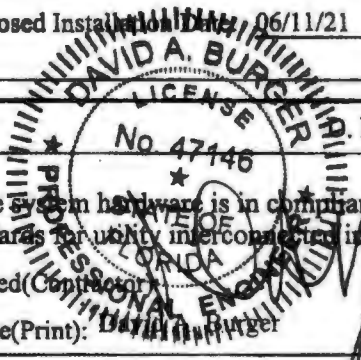
Installation Contractor: David Burger Tetra Tech FL License No.: PE 47146

Address: 201 East Pine

City: ORLANDO Zip Code: 32801

Daytime Phone: (321) 332-8174 Fax: \_\_\_\_\_ Email: davidburger123@yahoo.com

Proposed Installation Date: 06/11/21



**D. Hardware and Installation Compliance**

1. The system hardware is in compliance with Underwriters Laboratories (UL) 1741, and IEEE 1547 standards for utility interconnection inverters.

Signed (Contractor): [Signature] Date: 8/11/2020  
Name (Print): David A. Burger Company: Tetra Tech

**E. Owner Acknowledgment**

The system has been installed to my satisfaction and I have been given system warranty information, and an operation manual. Also, I have been thoroughly instructed in the operation and maintenance of the system.

Pre-application, system has not been installed.

Signed (Owner): [Signature] Date: SEP 01 2020



**F. Electrical Code Inspection**

Satisfies Code Requirements  
Inspector Name (Print): \_\_\_\_\_

Inspector Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**G. Duke Energy Florida, Inc. Approval**

Satisfies DEF Interconnection Requirements

DEF Representative

Name(Print): \_\_\_\_\_

DEF Representative Signature: \_\_\_\_\_ Date: \_\_\_\_\_



SECTION NO. VII  
THIRD REVISED SHEET NO. 7.320  
CANCELS SECOND REVISED SHEET NO. 7.320

**DUKE ENERGY FLORIDA, INC.  
STANDARD INTERCONNECTION AGREEMENT  
FOR TIER 3 CUSTOMER-OWNED RENEWABLE GENERATION SYSTEMS (>100kw, <=2mw)**

THIS AGREEMENT is made on \_\_\_\_\_ by and between Orange County, Florida \_\_\_\_\_ (hereinafter called the Customer), located at the address shown in the attached Application and Compliance Form, and Duke Energy Florida, Inc., a corporation organized and existing under the laws of the State of Florida (hereinafter called the Company).

**WITNESSETH:**

WHEREAS, the Customer has made a request to interconnect its renewable generation Tier 3 system(s), more than 100 kilowatts or less than or equal to 2 megawatts in total, which is primarily intended to offset part or all of the customer's electricity requirements, with the Company's electric supply grid at the Customer's presently metered location.

NOW, THEREFORE, in consideration of the mutual covenants and agreements expressed herein, the Company and the Customer agree as follows:

**General Responsibilities of Both Parties:**

1. The Customer certifies that the system's hardware and its installation, operation and maintenance is in compliance and shall continue to comply with the applicable standards, codes and manufacturer's instructions set forth in the Application and Compliance Form attached hereto and incorporated herein, and that all other information therein provided by the Customer is true and correct. The Customer shall notify the Company in writing of any changes to its system.
2. The Customer shall pay an application fee of \$750 for this Tier 3 Customer-owned renewable generation system interconnection.
3. In order to commence the process for interconnection, the Customer shall provide the Company a completed application. Applications can be downloaded from the Company's website: [www.progress-energy.com/florida/home/renewable-energy/interconnect.page](http://www.progress-energy.com/florida/home/renewable-energy/interconnect.page).
4. The Customer is responsible for the protection of its generation equipment, inverters, protection devices, and other system components from damage from the normal and abnormal operations that occur on the Company's utility system in delivering and restoring system power; and is responsible for insuring that the equipment is inspected, maintained, and tested in accordance with the manufacturer's instructions to insure that it is operating correctly and safely.
5. Customer-owned renewable generation shall be considered certified for interconnected operation if it has been submitted by a manufacturer to a nationally recognized testing and certification laboratory, and has been tested and listed by the laboratory for continuous interactive operation with an electric distribution system in compliance with the applicable codes and standards of IEEE 1547, IEEE 1547.1 and UL 1741.
6. Customer-owned renewable generation shall include a utility-interactive inverter, or other device certified pursuant to item 5 listed above, that performs the function of automatically isolating the Customer-owned generation equipment from the electric grid in the event the electric grid loses power.
7. The Customer agrees to provide Local Building Code Official inspection and certification of installation. The certification shall reflect that the local code official has inspected and certified that the installation was permitted, has been approved, and has met all electrical and mechanical qualifications.



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8. The Company requires that the Customer maintain general liability insurance for personal injury and property damage in the amount of not less than two million dollars (\$2,000,000). The customer shall provide the Company proof of continuing insurance coverage on an annual basis to the extent permitted by law. For government entities, the policy coverage shall not exceed the entity's maximum liability established by law. Proof of self-insurance consistent with law shall satisfy this requirement.
9. The total capacity of the Customer generation system(s) does not exceed 90% of the rating of service currently provided to the customer (based on service size, transformer rating, etc.) and has a total gross power rating of greater than 100kw up to 2mw.
10. The Company may isolate the Customer's system from the distribution grid using the manual disconnect switch without prior notice to the Customer. To the extent practical, however, prior notice shall be given. The system will be reconnected as soon as practical once the conditions causing the disconnection cease to exist. Conditions which may require the disconnection of the Customer's system are:
  - (a) Company utility system emergencies or maintenance requirements.
  - (b) Hazardous conditions existing on the Company's utility system due to the operation of the Customer's generation or protective equipment as determined by the Company.
  - (c) Adverse electrical effects (such as power quality problems) on the electrical equipment of the company's other electric consumers caused by the Customer's generation as determined by the Company.
  - (d) Failure of the Customer to maintain the required insurance coverage.In the event the Company disconnects the Customer's system without prior notice, the Company will leave a door hanger notifying the customer of the disconnection including an explanation of the conditions requiring such action.
11. The Customer, to the extent permitted by law without waiving or limiting any defenses of sovereign immunity, shall hold harmless and indemnify the Company for all loss to third parties resulting from the operation of the customer- owned renewable generation, except when the loss occurs due to the negligent actions of the Company. The Company shall hold harmless and indemnify the Customer for all loss to third parties resulting from the operation of the Company's system, except when the loss occurs due to the negligent actions of the Customer. Nothing herein shall be intended to serve as a waiver or limitation of Customer's sovereign immunity defenses as allowed by law.
12. Prior to connection and parallel operation of the Customer's generation system with the Company's electric system, the Customer shall provide 10 days notice and permit the Company, if it should so choose, to inspect the system and its component equipment and the documents necessary to insure compliance with various sections of this Agreement and to have personnel present on the in-service date of the Customer's generation system equipment and protective apparatus
13. In no event shall any statement, representation, or lack thereof, either express or implied, by the Company, relieve the Customer of exclusive responsibility for the Customer's generation system. Specifically, any company inspection of the Customer's system shall not be construed as confirming or endorsing the Customer's system design or its operating or maintenance procedures nor as a warranty or guarantee as to the safety, reliability, or durability of the Customer's equipment. The Company's inspection, acceptance, or its failure to inspect shall not be deemed an endorsement of any of the Customer's equipment or procedures.
14. The Company will install metering equipment on the Customer's premises capable of measuring any excess kilowatt-hours produced by the Customer's system and delivered to the Company's electric system. The cost of the meter, installation, maintenance, and any costs of reading and billing associated with this meter equipment shall be borne by the Company. The value of such excess generation shall be reflected on the Customer's bill based on the Company's applicable net metering for customer-owned renewable generation tariff approved by the Florida Public Service Commission. This tariff can be found at the Company's website: [www.progress-energy.com/florida/home/renewable-energy/interconnect.page](http://www.progress-energy.com/florida/home/renewable-energy/interconnect.page)



15. The Customer must install a manual AC load break disconnect switch at their expense shall be mounted separate from, but adjacent to the Company's meter socket. The Customer shall ensure that such disconnect switch shall remain readily accessible to the Company and be capable of being locked in the open position with a single Company utility lock.
16. On termination of services pursuant to this Agreement, the Company shall remove any additional metering equipment related to this Agreement. At the Customer's expense, within 10 working days following the termination, the Customer shall permanently isolate the generation system and any associated equipment from the Company's electric supply system, and notify the Company that the isolation is complete.

**Inspection and On-going Compliance:**

17. The Company will provide the Customer with as much notice as reasonably possible, either in writing, e-mail, facsimile or by phone as to when the Company may conduct inspections and/or document review. Upon reasonable notice, the Company shall have access to the Customer's premises for any reasonable purpose in connection with the performance of the obligations imposed by this Interconnection Agreement or, if necessary, to meet the Company's legal obligation to provide service to its Customers. At any time without notice in the event of emergency or hazardous conditions, the Company shall have access to the customers premise to operate a manual disconnect switch or disconnect the meter

**Modifications/Additions to Customer-owned Renewable Generation:**

18. If the Customer-owned renewable generation system is subsequently modified in order to increase its Gross power rating, the Customer must notify the Company by submitting a new application specifying the modification at least thirty days prior to making the modification.
19. If the Customer adds another Customer-owned renewable generator system which
  - i.) utilizes the same utility inter-active inverter for both systems; or
  - ii.) utilizes a separate utility inter-active inverter for each system the Customer shall provide thirty days notice prior to installation
20. In the event any Customer modifications or additions result in the input to any Company meter so as to exceed the limits of a Tier 3 system (capacity of more than 2 megawatts), then all terms and conditions of the net metering tariff no longer apply and the customer will be required to enter an agreement to sell all power to the Company at the As-Available and COG-1 tariff or the Standard Offer and COG-2 tariff.
21. The Interconnection Agreement which applies in instances described in sections 18-20 above shall be determined by the maximum output of the generation system(s) which is connected to the Company's meter. In all instances described in this section, the Customer shall submit a new application to the Company and shall enter into a new Interconnection Agreement.

**Renewable Energy Credits:**

22. The Customer shall retain any Renewable Energy Certificates produced by the Customer-owned renewable generation equipment, and any additional meters necessary for measuring the total renewable electricity generated for the purposes of receiving Renewable Energy Certificates shall be installed at the Customer's expense, unless otherwise determined during negotiations for the sale of the Customer's Renewable Energy Certificates to the Company.

**Lease Agreements:**





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- 23. The Customer shall provide the Company a copy of the lease agreement, as applicable, for any and all leased interconnection equipment.
- 24. The Customer shall not enter into any lease agreement that results in the retail sale of electricity. Notwithstanding this restriction, in the event the Customer so enters such an agreement, the Customer may become subject to the Florida Public Service Commission's jurisdiction and may be subject to various fines and penalties

**Assignment:**

- 25. The Customer shall not have the right to assign its benefits or obligations under this Agreement without the Company's prior written consent and such consent shall not be unreasonably withheld. The Company may require the assignee to sign a new copy of this Agreement, agreeing to all its requirements. The Customer shall notify the Company in writing prior to any such anticipated assignment.
- 26. An assignee to this Interconnection Agreement shall have the same rights, responsibilities and obligations as the assigning Party.

**Entire Agreement:**

- 27. In executing this Agreement, the Company does not, nor should it be construed to extend its credit or financial support for the benefit of any third parties lending money to or having other transactions with Customer or any assignee of this Agreement.
- 28. Disputes between the Parties shall be handled in accordance with subsection 11 of Florida Public Service Commission Rule 25-6.065 F.A.C. — Interconnection and Net Metering of Customer-owned Renewable Generation.
- 29. The Customer must execute this Interconnection Agreement and the Customer's subsequent application submitted thereunder and return it to the Company at least thirty calendar days prior to beginning parallel operations.
- 30. This Agreement shall be governed by and construed and enforced in accordance with the laws, rules and regulations of the State of Florida and the Company's Tariff as may be modified, changed, or amended from time to time.
- 31. The Company's tariff and associated technical terms and abbreviations, general rules and regulations and standard electric service requirements, as may be applicable, are incorporated by reference.
- 32. This Interconnection Agreement supersedes all previous agreements or representations, either written or oral, heretofore in effect between the Company and the Customer, made in respect to matters herein contained, and when duly executed, this Interconnection Agreement constitutes the entire agreement between Parties hereto.
- 33. For those Customers which are government entities, provisions within this agreement will apply to the extent the agency is not legally barred from executing such provisions by State or Federal law.

IN WITNESS WHEREOF, the Customer has executed this Agreement the day and year first written above.

CUSTOMER

COMPANY

Signature of Customer or Authorized Representative: Raymond B. Bivolar

Signature of Company Representative: \_\_\_\_\_

Title of Authorized Representative: County Administrator

Title of Company Representative: \_\_\_\_\_

Customer Account Number: 7189224296

