

OCALA ELECTRIC UTILITY  
OCALA, FLORIDA

FIRST REVISED SHEET NO. 19.0  
CANCELS ORIGINAL SHEET NO. 19.0

**APPLICATION FOR INTERCONNECTION OF  
CUSTOMER-OWNED RENEWABLE  
GENERATION SYSTEMS**

TIER 1 - Ten (10) kW or Less

TIER 2 - Greater than 10 kW and Less Than or Equal to 100 kW

TIER 3 - Greater than 100 kW and Less Than or Equal to Two (2) MW

Note: These customer-owned renewable generation system size limits may be subject to a cumulative enrollment limit on net-metering customers located in the area served by the City of Ocala Electric Utility. Please refer to the Ocala Electric Utility Net-Metering Rate Schedule.

Ocala Electric Utility customers who install customer-owned renewable generation systems (RGS) and desire to interconnect those facilities with the Ocala Electric Utility system are required to complete this application. When the completed application and fees are returned to Ocala Electric Utility, the process of completing the appropriate Tier 1, Tier 2 or Tier 3 Interconnection Agreement can begin. This application and copies of the Interconnection Agreements may be obtained at Ocala Electric Utility, located at 201 SE 3rd Street, Ocala, Florida 34471, or may be requested by email from OEU@ocalafl.org.

**1. Customer Information**

Name: Hugh Allen

Mailing Address: 415 SE 39th Ave, Ocala, FL 34471

City: Ocala State: FL Zip Code: 34471

Phone Number: (352) 966-7514 Alternate Phone Number: \_\_\_\_\_

Email Address: mattallen32@gmail.com Fax Number: N/A

Ocala Electric Utility Customer Account Number: 500935-250988

**2. RGS Facility Information**

Facility Location: 415 SE 39th Ave, Ocala, FL 34471

Ocala Electric Utility Customer Account Number: 500935-250988

RGS Manufacturer: 37 HANWHA Q CELLS Q.PEAK DUO BLK ML-G10+/TS 405W MODULES

Manufacturer's Address: 37 ENPHASE IQ8PLUS-72-2-US MICROINVERTERS

Reference or Model Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

(Continued on Sheet No.19.1)

Issued by: Michael Poucher, P.E.  
Electric Utility Director

Effective: October 1, 2019

OCALA ELECTRIC UTILITY  
OCALA, FLORIDA  
(Continue from Sheet No. 19.0)

FIRST REVISED SHEET NO. 19.1  
CANCELS ORIGINAL SHEET NO. 19.1

### 3. Facility Rating Information

Gross Power Rating: 12.737 KW-AC ("Gross power rating" means the total manufacturer's AC nameplate generating capacity of an on-site customer-owned renewable generation system that will be interconnected to and operate in parallel with Ocala Electric Utility's distribution facilities. For inverter-based systems, the AC nameplate generating capacity shall be calculated by multiplying the total installed DC nameplate generating capacity by 0.85 in order to account for losses during the conversion from DC to AC.)

Fuel or Energy Source: SOLAR

Anticipated In- Service Date: 7/12/24

### 4. Application Fee

The application fee is based on the Gross Power Rating and must be submitted with this application. The non-refundable application fee is \$375 for Tier 2 and \$750 for Tier 3 installations. There is no application fee for Tier 1 installations.

### 5. Interconnection Study Fee

For Tier 3 installations, a deposit in the amount of the estimated costs of the study (to be determined at time of application) must be paid along with this application in addition to the application fee referenced in Article 4 above. This deposit will be applied toward the cost of an interconnection study. The customer will be responsible for the actual costs of the study. Should the actual cost of the study be less than the deposit, the difference will be refunded to the customer. Customer agrees to comply with all interconnection requirements identified in the interconnection study report.

### 6. Required Documentation

Prior to completion of the Interconnection Agreement, the following information must be provided to the Ocala Electric Utility by the customer.

- A. Documentation demonstrating that the installation complies with (or most current version at time of inspection approval):
  1. IEEE 1547 (2018) Standard for Interconnecting Distributed Resources with Electric Power Systems.
  2. IEEE 1547.1 (2005) Standard Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems.
  3. UL 1741 (2010) Inverters, Converters, Controllers and Interconnection System Equipment for Use with Distributed Energy Resources.

(Continued on Sheet No. 19.2)

Issued by: Michael Poucher, P.E.  
Electric Utility Director

Effective: October 1, 2019

**OCALA ELECTRIC UTILITY**  
**OCALA, FLORIDA**  
(Continued from Sheet No. 19.1)

**FIRST REVISED SHEET NO. 19.2**  
**CANCELS ORIGINAL SHEET NO. 19.2**

B. Documentation that the customer-owned renewable generation has been inspected and approved by local code officials prior to its operation in parallel with the Ocala Electric Utility system to ensure compliance with applicable local codes. OEU will also require proof of commission testing by a qualified 3<sup>rd</sup> party testing company (not affiliated in any way with the manufacturer, vendor or installation contractor), for compliance with all required and applicable codes, standards, and interconnection study requirements, prior to setting of OEU metering equipment.

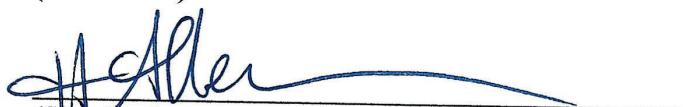
C. Proof of insurance in the amount of:

Tier 1 - \$100,000.00  
Tier 2 - \$1,000,000.00  
Tier 3 - \$2,000,000.00

**Customer**

By: Hugh Allen  
(Print Name)

Date: 6/12/24

  
(Signature)

Issued by: Michael Poucher, P.E.  
Electric Utility Director

Effective: October 1, 2019

OCALA ELECTRIC UTILITY  
OCALA, FLORIDA

FIRST REVISED SHEET NO. 20.0  
CANCELS ORIGINAL SHEET NO. 20.0

## **Tri-Party Net-Metering Power Purchase Agreement**

This Tri-Party Net-Metering Power Purchase Agreement (this “Agreement”) is entered into this 12 day of June, 2024, by and between the Florida Municipal Power Agency, a governmental joint action agency created and existing under the laws of the State of Florida (hereinafter “FMPA”), the City of Ocala doing business as Ocala Electric Utility, a body politic (hereinafter “OEU”), and Hugh Allen, a retail electric customer of OEU (hereinafter “Customer”).

### **Section 1. Recitals**

1.01. OEU and Customer have executed OEU’s Standard Interconnection Agreement for a Customer-Owned Renewable Generation System (RGS) pursuant to which OEU has agreed to permit interconnection of Customer’s renewable generation to OEU’s electric system at Customer’s presently-metered location, and Customer has agreed to deliver excess electric energy generated by Customer’s Renewable Generation System to OEU’s electric distribution system;

1.02. The City of Ocala and FMPA have entered into the All-Requirements Power Supply Contract, dated as of May 1, 1986, (hereinafter the “ARP Contract”) pursuant to which the City of Ocala has agreed to purchase and receive, and FMPA has agreed to sell and supply OEU with all energy and capacity necessary to operate the OEU electric system, which limits OEU’s ability to directly purchase excess energy from customer-owned renewable generation.

1.03. In order to promote the development of small customer-owned renewable generation by permitting OEU to allow its customers to interconnect with OEU’s electric system and to allow OEU’s electric customers to offset their electric consumption with customer-owned renewable generation, FMPA, in accordance with the terms and conditions of this agreement, has agreed to purchase excess customer-owned generation from OEU’s electric customers interconnected to OEU’s electric system.

NOW THEREFORE, for and in consideration of the mutual covenants and agreements set forth herein, the Parties covenant and agree as follows:

### **Section 2. Interconnection**

2.01. Customer shall not begin parallel operations with the OEU electric distribution system until Customer has executed OEU’s electric Standard Interconnection Agreement for Small Customer-Owned Renewable Generation and is in compliance with all terms and conditions

OEU requires that the customer install and operate the RGS in accordance with all applicable safety codes and standards. OEU shall establish and enforce terms and conditions of operation and disconnection of all interconnected customer-owned renewable generation as it relates to the effect of the RGS on OEU’s electric distribution system.

(Continued on Sheet No. 20.1)

Issued by: Michael Poucher, P.E.  
Electric Utility Director

Effective: October 1, 2019

OCALA ELECTRIC UTILITY  
OCALA, FLORIDA  
(Continued from Sheet No. 20.0)

FIRST REVISED SHEET NO. 20.1  
CANCELS ORIGINAL SHEET NO. 20.1

### **Section 3. Metering**

3.01 In accordance with the OEU's Standard Interconnection Agreement for Customer-Owned Renewable Generation, OEU shall install metering equipment at the point of delivery capable of recording two separate kWh meter readings: (1) the flow of electricity from OEU to the Customer (Delivered), and (2) the flow of excess electricity from the Customer to OEU. OEU shall take meter readings on the same cycle as the otherwise applicable rate schedule.

### **Section 4. Purchase of Excess Customer-Owned Renewable Generation**

4.01. Customer-owned renewable generation shall be first used for Customer's own load and shall offset Customer's demand for OEU's electricity. All electric power and energy delivered by OEU to Customer shall be received and paid for by Customer to OEU (Received) pursuant to the terms, conditions and rates of the OEU otherwise applicable rate schedule.

4.02. Excess customer-owned renewable generation shall be delivered to the OEU Electric distribution system. For purposes of this Agreement, the term "excess customer-owned renewable generation" means any kWh of electrical energy produced by the customer-owned renewable generation system that is not consumed by Customer and is delivered to the OEU electric distribution system. FMPA agrees to purchase and receive, and Customer agrees to sell and deliver, all excess customer-owned renewable generation at the energy rate established by FMPA, which shall be calculated in accordance with Schedule A. Excess customer-owned renewable generation shall be purchased in the form of a credit on Customer's monthly energy consumption bill from OEU.

4.03. In the event that a given monthly credit for excess customer-owned renewable generation exceeds the total billed amount for Customer's consumption in any corresponding month, then the excess credit shall be applied to the subsequent month's bill. Excess energy credits produced pursuant to the preceding sentence shall accumulate and be used to offset Customer's energy consumption bill for a period of not more than twelve (12) months. At the end of each calendar year, any unused excess energy credits shall be paid by OEU to the Customer in accordance with the OEU Electric Net-Metering Service Rate Schedule.

(Continued on Sheet No. 20.2)

OCALA ELECTRIC UTILITY  
OCALA, FLORIDA  
(Continued from Sheet No. 20.1)

FIRST REVISED SHEET NO. 20.2  
CANCELS ORIGINAL SHEET NO. 20.2

4.04. FMPA and OEU shall not be required to purchase or receive excess customer-owned renewable generation, and may require Customer to interrupt or reduce production of customer-owned renewable generation, (a) when necessary in order to construct, install, maintain, repair, replace, remove, investigate, or inspect any OEU equipment or part of OEU's system; or (b) if either FMPA or OEU determine, in their sole judgment, that curtailment, interruption, or reduction is necessary because of emergencies, forced outages, force majeure, or compliance with any applicable electric code or standard.

4.05. Customer acknowledges that its provision of electricity to OEU hereunder is on a first-offered, first-accepted basis and subject to diminution and/or rejection in the event the total amount of electricity delivered to OEU pursuant to the Net-Metering Service Rate Schedule (as filed with the Florida Public Service Commission), from all participating OEU customers, exceeds two and one-half percent (2.5%) of the aggregate customer peak demand on the OEU electric system.

### **Section 5. Renewable Energy Credits**

5.01. Customer shall offer FMPA a first right of refusal before selling or granting to any third party the right to the Green Attributes associated with its customer-owned renewable generation that is interconnected to OEU electric distribution system. The term "Green Attributes" shall include any and all credits, certificates, benefits, environmental attributes, emissions reductions, offsets, and allowances, however entitled, attributable to the generation of electricity from the customer-owned-renewable generation and its displacement of conventional energy generation.

5.02. Any additional meter(s) installed to measure total renewable electricity generated by the Customer for the purposes of measuring Green Attributes, including and renewable energy certificates (or similarly titled credits for renewable energy generated), shall be installed at the expense of the Customer, unless determined otherwise during negotiations for the sale of the Customer's credits to FMPA.

### **Section 6. Term and Termination**

6.01. This Agreement shall become effective upon execution by all Parties, and shall remain in effect thereafter on a month-to-month basis until terminated by any Party upon thirty (30) days written notice to all other Parties.

6.02. This Agreement shall terminate immediately and without notice upon: (a) termination of the electric distribution service by OEU or (b) failure by Customer to comply with any of the terms and conditions of this Agreement or OEU's Standard Interconnection Agreement for Customer-Owned Renewable Generation.

(Continued on Sheet No. 20.3)

Issued by: Michael Poucher, P.E.  
Electric Utility Director

Effective: October 1, 2019

OCALA ELECTRIC UTILITY  
OCALA, FLORIDA  
(Continued from Sheet No. 20.2)

FIRST REVISED SHEET NO. 20.3  
CANCELS ORIGINAL SHEET NO. 20.3

## Section 7. Miscellaneous Provisions

7.01. Assignment. It is understood and agreed that no party may transfer, sell, mortgage, pledge, hypothecate, convey, designate, or otherwise assign this Agreement, or any interest herein or any rights or obligations hereunder, in whole or in part, either voluntarily or by operation of law, (including, without limitation, by merger, consolidation, or otherwise), without the express written consent of the other parties (and any such attempt shall be void), which consent shall not be unreasonably withheld. Subject to the foregoing, this Agreement shall inure to the benefit of and be binding upon the parties and their respective successors and permitted assigns.

7.02 Amendment. It is understood and agreed that FMPA and OEU reserve the right, on no less than an annual basis, to change any of the terms and conditions, including pricing, in this Agreement on sixty (60) days advance written notice. FMPA and OEU may make such changes on an immediate basis in the event any applicable law, rule, regulation or court order requires them. In such event, FMPA and OEU will give Customer as much notice as reasonably possible under the circumstances.

7.03. Indemnification. To the fullest extent permitted by laws and regulations, and in return for adequate, separate consideration, Customer shall defend, indemnify, and hold harmless FMPA and OEU, their officers, directors, agents, guests, invitees, and employees from and against all claims, damages, losses to persons or property, whether direct, indirect, or consequential (including but not limited to fees and charges of attorneys, and other professionals and court and arbitration costs) arising out of, resulting from, occasioned by, or otherwise caused by the operation or misoperation of the customer-owned renewable generation, or the acts or omissions of any other person or organization directly or indirectly employed by the Customer to install, furnish, repair, replace or maintain the customer-owned renewable generation system, or anyone for whose acts any of them may be liable.

7.04. Governing Law. The validity and interpretation of this Agreement and the rights and obligations of the parties shall be governed and construed in accordance with the laws of the State of Florida without regard for any conflicts of law provisions that might cause the law of other jurisdictions to apply. All controversies, claims, or disputes arising out of or related to this Agreement or any agreement, instrument, or document contemplated hereby, shall be brought exclusively in the County or Circuit Court for Marion County, Florida, or the United States District Court sitting in Marion County, Florida, as appropriate.

(Continued on Sheet No. 20.4)

Issued by: Michael Poucher, P.E.  
Electric Utility Director

Effective: October 1, 2019

OCALA ELECTRIC UTILITY  
OCALA, FLORIDA  
(Continued from Sheet No. 20.3)

FIRST REVISED SHEET NO. 20.4  
CANCELS ORIGINAL SHEET NO. 20.4

7.05. Enforcement of Agreement. In the event that either party is required to enforce this Agreement by court proceedings or otherwise, the prevailing party shall be entitled to recover all fees and costs incurred, including reasonable attorney's fees and costs for trial, alternative dispute resolution, and/or appellate proceedings.

7.06. Severability. To the extent any provision of this Agreement is prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Agreement.

7.07. Third Party Beneficiaries and Sovereign Immunity. This Agreement is solely for the benefit of FMPA, OEU, and Customer and no right nor shall any cause of action accrue upon or by reason, to or for the benefit of any third party not a formal party to this Agreement. Nothing in this Agreement, expressed or implied, is intended or shall be construed to confer upon any person or corporation other than FMPA, OEU, or Customer, any right, remedy, or claim under or by reason of this Agreement or any of the provisions or conditions of this Agreement; and, all provisions, representations, covenants, and conditions contained in this Agreement shall inure to the sole benefit of and be binding upon FMPA, OEU, and Customer and their respective representatives, successors, and assigns. Further, no term or condition contained in this Agreement shall be construed in any way as a waiver by either FMPA or OEU of the sovereign immunity applicable to either or both of them as established by Florida Statutes, 768.28.

(Continued on Sheet No. 20.5)

Issued by: Michael Poucher, P.E.  
Electric Utility Director

Effective: October 1, 2019

**OCALA ELECTRIC UTILITY**  
**OCALA, FLORIDA**  
(Continued from Sheet No. 20.4)

**FIRST REVISED SHEET NO. 20.5**  
**CANCELS ORIGINAL SHEET NO. 20.5**

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

**City of Ocala Electric Utility**

By:  Signed by:  
Janice Mitchell  
551988436504NET...  
Title: CFO  
Date: 8/14/2024

**Florida Municipal Power Agency**

By:  DocuSigned by:  
Carol  
087758EBB346474...  
Title: VP of IT/OT and System Ops  
Date: 8/14/2024

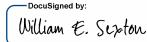
**Customer**

By: Hugh Allen  
(Print Name)  
  
(Signature)

Date: 6/2/24

Customer's City of Ocala Electric Utility Account Number: 500935-250988

Approved as to form and legality:

 DocuSigned by:  
William E. Sexton  
5070CCFCEBEC...

William E. Sexton, Esq.  
City Attorney

(Continued on Sheet No. 20.6)

Issued by: Michael Poucher, P.E.  
Electric Utility Director

Effective: October 1, 2019

OCALA ELECTRIC UTILITY  
OCALA, FLORIDA  
(Continued from Sheet No. 20.5)

FIRST REVISED SHEET NO. 20.6  
CANCELS ORIGINAL SHEET NO. 20.6

**Tri-Party Net-Metering Power Purchase Agreement  
Schedule A**

**I. All-Requirements Project Calculation of Excess Customer-Owned Renewable Generation Credit**

- a) FMPA shall pay OEU for the excess kWh energy delivered by customer-owned renewable generation to OEU's electric system. Every month, OEU shall determine the total kWh of customer-owned renewable generation that is delivered to OEU's electric system, and shall send the information to FMPA as soon as it becomes available, but no later than the second working day of every month. FMPA will then provide a monthly payment to OEU in the form of a credit on the ARP power bill for the excess energy delivered to the distribution grid. The ARP Renewable Generation Credit will be calculated as follows:

**ARP Renewable Generation Credit = Quarterly Energy Rate \* Monthly kWh of excess customer-owned renewable generation**

**Quarterly Energy Rate = 3 month average of ARP energy rate. FMPA will update the Quarterly Energy Rate every April 1, July 1, October 1 and January 1.**

- b) As part of the monthly bill adjustment, FMPA will also increase OEU's kWh billing amount by the same kWh amount as the customer-owned renewable generation purchased by FMPA. This adjustment is necessary because excess customer generation that flows onto OEU's electric system has been purchased by FMPA, but will remain on OEU's electric system and be used by OEU to meet its other customers' electric needs. As a result, OEU's monthly ARP bill will be adjusted accordingly to reflect FMPA's subsequent sale of this energy to OEU.

**II. Payment for Unused Excess Energy Credits**

- a) Monthly excess energy credits shall accumulate and be used to offset the Customer's following month energy consumption bill for a period of not more than twelve (12) months.
- b) At the end of each calendar year, OEU shall pay the Customer for any unused excess energy credits in accordance with the OEU Electric Net-Metering Service Rate Schedule.

OCALA ELECTRIC UTILITY  
OCALA, FLORIDA

FIRST REVISED SHEET NO. 22.0  
CANCELS ORIGINAL SHEET NO. 22.0

**Tier 2**  
**Standard Interconnection Agreement**  
**Customer-Owned Renewable Generation System**

This **Agreement** is made and entered into this 12 day of June, 2024, by and between Hugh Allen, (hereinafter called "**Customer**"), located at 415 SE 39th Ave, Ocala, in Ocala, Florida, and the City of Ocala doing business as Ocala Electric Utility (hereafter called "**OEU**"), a body politic. Customer and OEU shall collectively be called the "**Parties**". The physical location/premise where the interconnection is taking place: 415 SE 39th Ave, Ocala, FL 34471.

**WITNESSETH**

**Whereas**, a Tier 2 Renewable Generation System (RGS) is an electric generating system that uses one or of more of the following fuels or energy sources: hydrogen, biomass, solar energy, geothermal energy, wind energy, ocean energy, waste heat, or hydroelectric power as defined in Section 377.803, Florida Statutes, rated at more than 10 kilowatts (10 kW) but not greater than 100 kilowatts (100 kW) alternating current (AC) power output and is primarily intended to offset part or all of the customer's current electric requirements; and

**Whereas**, OEU operates an electric system serving parts of the City of Ocala and Marion County; and

**Whereas**, Customer has made a written Application to OEU, a copy being attached hereto, to interconnect its RGS with OEU's electrical supply grid at the location indentified above; and

**Whereas**, the City of Ocala and the Florida Municipal Power Agency (hereinafter called "FMPA") have entered into the All-Requirements Power Supply Contract pursuant to which OEU has agreed to purchase and receive, and FMPA has agreed to sell and supply OEU with all energy and capacity necessary to operate OEU's electric system, which limits OEU's ability to directly purchase excess energy from customer-owned renewable generation; and

**Whereas**, in order to promote the development of small customer-owned renewable generation by permitting OEU to allow its customers to interconnect with OEU's electric system and to allow OEU customers to offset their electric consumption with customer-owned renewable generation, FMPA, in accordance with the terms and conditions of this agreement, has agreed to purchase excess customer-owned generation from OEU customers interconnected to OEU's electric system; and

**Whereas**, OEU desires to provide interconnection of a RGS under conditions which will insure the safety of OEU customers and employees, reliability and integrity of its distribution system;

(Continued on Sheet No. 22.1)

Issued by: Michael Poucher, P.E.  
Electric Utility Director

Effective: October 1, 2019

OCALA ELECTRIC UTILITY  
OCALA, FLORIDA  
(Continued from Sheet No. 22.0)

FIRST REVISED SHEET NO. 22.1  
CANCELS ORIGINAL SHEET NO. 22.1

**NOW, THEREFORE**, for and in consideration of the mutual covenants and agreements herein set forth, the parties hereto covenant and agree as follows:

1. The Customer shall be required to enter into a Tri-Party Net-Metering Purchase Power Agreement with FMPA and OEU.
2. “Gross power rating” (GPR) means the total manufacturer’s AC nameplate generating capacity of an on-site customer-owned renewable generation system that will be interconnected to and operate in parallel with OEU distribution facilities. For inverter-based systems, the GPR shall be calculated by multiplying the total installed DC nameplate generating capacity by 0.85 in order to account for losses during the conversion from DC to AC.
3. This agreement is strictly limited to cover a Tier 2 RGS as defined above. It is the Customer’s responsibility to notify OEU of any change to the GPR of the RGS by submitting a new application for interconnection specifying the modifications at least 30 days prior to making the modifications. In no case should modifications to the RGS be made such that the GPR increases above the 100 kilowatts (100 kW) limit.
4. The RGS GPR must not exceed 90 percent (90%) of the Customer’s OEU calculated distribution service rating at the Customer’s location (including shared electric facilities). If the GPR does exceed the 90 percent (90%) limit, the Customer shall be responsible to pay the cost of upgrades to the distribution facilities required to accommodate the GPR capacity and ensure the 90 percent (90%) threshold is not breached. OEU will not allow a RGS GPR greater than required to offset the customer’s annual kWh energy consumption (based on customer’s historical consumption data or by means of estimated usage of similar type of service as determined by OEU).
5. The Customer shall be required to pay a non-refundable application fee of \$375 for the review and processing of the application.
6. The Customer shall fully comply with OEU’s Rules and Regulations and Electric Service Specifications as those documents may be amended or revised by OEU from time to time.
7. The Customer certifies that its installation, its operation and its maintenance shall be in compliance with the following standards (or most current version at time of inspection approval):
  - a. IEEE-1547 (2018) Standard for Interconnecting Distributed Resources with Electric Power System;
  - b. IEEE-1547.1 (2005) Standard Conformance Test Procedures for Equipment Interconnection Distributed Resources with Electric Power Systems;
  - c. UL-1741 (2010) Inverters, Converters, Controllers and Interconnection System Equipment for Use with Distributed *Energy Resources*.

(Continued on Sheet No. 22.2)

Issued by: Michael Poucher, P.E.  
Electric Utility Director

Effective: October 1, 2019

OCALA ELECTRIC UTILITY  
OCALA, FLORIDA  
(Continued from Sheet No. 22.1)

FIRST REVISED SHEET NO. 22.2  
CANCELS ORIGINAL SHEET NO. 22.2

- d. The National Electric Code, state and/or local building codes, mechanical codes and/or electrical codes;
- e. The manufacturer's installation, operation and maintenance instructions.

8. The Customer is not precluded from contracting for the lease, operation or maintenance of the RGS with a third party. Such lease may not provide terms or conditions that provide for any payments under the agreement to any way indicate or reflect the purchase of energy produced by the RGS. Customer shall not enter into any lease agreement that results in the retail purchase of electricity; or the retail sale of electricity from the customer-owned renewable generation. Notwithstanding this restriction, in the event that Customer is determined to have engaged in the retail purchase of electricity from a party other than OEU, then Customer shall be in breach of this Agreement and may be subject to the jurisdiction of the Florida Public Service Commission and to fines/penalties.

9. The Customer shall provide a copy of the manufacturer's installation, operation and maintenance instructions to OEU. If the RGS is leased to the Customer by a third party, or if the operation or maintenance of the RGS is to be performed by a third party, the lease and/or maintenance agreements and any pertinent documents related to these agreements shall be provided to OEU.

10. Prior to commencing parallel operation with OEU's electric system, Customer shall have the RGS inspected and approved by the appropriate code authorities having jurisdiction. Customer shall provide a copy of this inspection and approval to OEU.

11. The Customer agrees to permit OEU, if it should so choose, to inspect the RGS and its component equipment and the documents necessary to ensure compliance with this Agreement both before and after the RGS goes into service and to witness the initial testing of the RGS equipment and protective apparatus. OEU will provide Customer with as much notice as reasonably possible, either in writing, email, facsimile or by phone as to when OEU may conduct inspections and or document review. Upon reasonable notice, or at any time without notice in the event of an emergency or hazardous condition, Customer agrees to provide OEU access to the Customer's premises for any purpose in connection with the performance of the obligations required by this Agreement or, if necessary, to meet OEU's legal obligation to provide service to its customers. At least ten (10) business days prior to initially placing the customer-owned renewable generation system in service, Customer shall provide written notification to OEU advising OEU of the date and time at which Customer intends to place the system in service, and OEU shall have the right to have personnel present on the in-service date in order to ensure compliance with the requirements of this Agreement.

(Continued on Sheet No. 22.3)

Issued by: Michael Poucher, P.E.  
Electric Utility Director

Effective: October 1, 2019

OCALA ELECTRIC UTILITY  
OCALA, FLORIDA  
(Continued from Sheet No. 22.2)

FIRST REVISED SHEET NO. 22.3  
CANCELS ORIGINAL SHEET NO. 22.3

12. The Customer's RGS must have an appropriately sized grid-tie inverter system that includes applicable protective systems. Customer certifies that the RGS equipment includes a utility-interactive inverter or interconnection system equipment that ceases to interconnect with the OEU system upon a loss of OEU power. The inverter shall be considered certified for interconnected operation if it has been submitted by a manufacturer to a nationally recognized testing laboratory (NRTL) to comply with UL 1741. The NRTL shall be approved by the Occupational Safety & Health Administration (OSHA).

13. If Customer adds another RGS which (i) utilizes the same utility-interactive inverter for both systems; or (ii) utilizes a separate utility-interactive inverter for each system, then Customer shall provide OEU with sixty (60) days advance written notice of the addition.

14. The Customer shall not energize the OEU system when OEU's system is deenergized. The Customer shall cease to energize the OEU system during a faulted condition on the OEU system and/or upon any notice from OEU that the deenergizing of Customer's RGS equipment is necessary. The Customer shall cease to energize the OEU system prior to automatic or non-automatic reclosing of OEU's protective devices. There shall be no intentional islanding, as described in IEEE 1547, between the Customer's and OEU's systems.

15. 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 OEU's electric system in delivering and restoring system power. Customer agrees that any damage to any of its property, including, without limitation, all components and related accessories of its RGS system, due to the normal or abnormal operation of OEU's electric system, is at Customer's sole risk and expense. Customer is also responsible for ensuring that the customer-owned renewable generation equipment is inspected, maintained, and tested regularly in accordance with the manufacturer's instructions to ensure that it is operating correctly and safely.

16. The Customer must install, at their expense, a manual disconnect switch of the visible load break type to provide a separation point between the AC power output of the customer-owned renewable generation system and any Customer wiring connected to OEU's electric system such that back feed from the customer-owned renewable generation system to OEU's electric system cannot occur when the switch is in the open position. The manual disconnect switch shall be mounted separate from the meter socket on an exterior surface adjacent to the meter. The switch shall be readily accessible to OEU and capable of being locked in the open position with an OEU padlock. When locked and tagged in the open position by OEU, this switch will be under the control of OEU.

(Continued on Sheet No. 22.4)

Issued by: Michael Poucher, P.E.  
Electric Utility Director

Effective: October 1, 2019

OCALA ELECTRIC UTILITY  
OCALA, FLORIDA  
(Continued from Sheet No. 22.3)

FIRST REVISED SHEET NO. 22.4  
CANCELS ORIGINAL SHEET NO. 22.4

17. Subject to an approved inspection, including installation of acceptable disconnect switch, this Agreement shall be executed by OEU within thirty (30) calendar days of receipt of a completed application. Customer must execute this Agreement and return it to OEU at least thirty (30) calendar days prior to beginning parallel operations with OEU's electric system, subject to the requirements of Sections 18 and 19, below, and within one (1) year after OEU executes this Agreement.

18. Once OEU has received Customer's written documentation that the requirements of this Agreement have been met, all agreements and documentation have been received and the correct operation of the manual switch has been demonstrated to an OEU representative, OEU will, within fifteen (15) business days, send written notice that parallel operation of the RGS may commence.

19. OEU requires the Customer to maintain general liability insurance for personal injury and property damage in the amount of not less than one million dollars (\$1,000,000.00).

20. OEU will furnish, install, own and maintain metering equipment capable of measuring the flow of kilowatt-hours (kWh) of energy. The Customer's service associated with the RGS will be metered to measure the energy delivered by OEU to Customer, and also measure the energy delivered by Customer to OEU. Customer agrees to provide safe and reasonable access to the premises for installation, maintenance and reading of the metering and related equipment. The Customer shall not be responsible for the cost of the installation and maintenance of the metering equipment necessary to measure the energy delivered by the Customer to OEU.

21. The Customer shall be solely responsible for all legal and financial obligations arising from the design, construction, installation, operation, maintenance and ownership of the RGS.

22. The Customer must obtain all permits, inspections and approvals required by applicable jurisdictions with respect to the generating system and must use a licensed, bonded and insured contractor to design and install the generating system. The Customer agrees to provide OEU with a copy of the 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.

23. In no event shall any statement, representation, or lack thereof, either express or implied, by OEU, relieve the Customer of exclusive responsibility for the Customer's system. Specifically, any OUS inspection of the RGS shall not be construed as confirming or endorsing the system design or its operating or maintenance procedures or as a warranty or guarantee as to the safety, reliability, or durability of the RGS. OEU's inspection, acceptance, or its failure to inspect shall not be deemed an endorsement of any RGS equipment or procedure. Further, as set forth in Sections 15 and 26 of this Agreement, Customer shall remain solely responsible for any and all losses, claims, damages and/or expenses related in any way to the operation or misoperation of its RGS equipment.

(Continued on Sheet No. 22.5)

Issued by: Michael Poucher, P.E.  
Electric Utility Director

Effective: October 1, 2019

OCALA ELECTRIC UTILITY  
OCALA, FLORIDA  
(Continued from Sheet No. 22.4)

FIRST REVISED SHEET NO. 22.5  
CANCELS ORIGINAL SHEET NO. 22.5

24. Notwithstanding any other provision of this Interconnection Agreement, OEU, at its sole and absolute discretion, may isolate the Customer's system from the distribution grid by whatever means necessary, 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. OEU shall have no obligation to compensate the Customer for any loss of energy during any and all periods when Customer's RGS is operating at reduced capacity or is disconnected from OEU's electrical distribution system pursuant to this Interconnection Agreement. Typical conditions which may require the disconnection of the Customer's system include, but are not limited to, the following:

- a. OEU utility system emergencies, forced outages, uncontrollable forces or compliance with prudent electric utility practice.
- b. When necessary to investigate, inspect, construct, install, maintain, repair, replace or remove any OEU equipment, any part of OEU's electrical distribution system or Customer's generating system.
- c. Hazardous conditions existing on OEU's utility system due to the operation of the Customer's generation or protective equipment as determined by OEU.
- d. Adverse electrical effects (such as power quality problems) on the electrical equipment of OEU's other electric consumers caused by the Customer's generation as determined by OEU
- e. When Customer is in breach of any of its obligations under this Interconnection Agreement or any other applicable policies and procedures of OEU.
- f. When the Customer fails to make any payments due to OEU by the due date thereof.

25. Upon termination of services pursuant to this Agreement, OEU shall open and padlock the manual disconnect switch and remove any additional metering equipment related to this Agreement. At the Customer's expense, within thirty (30) working days following the termination, the Customer shall permanently isolate the RGS and any associated equipment from OEU's electric supply system, notify OEU that the isolation is complete, and coordinate with OEU for return of OEU's lock.

26. To the fullest extent permitted by law, and in return for adequate, separate consideration, Customer shall indemnify, defend and hold harmless OEU, any and all of their members of its governing bodies, and its officers, agents, and employees for, from and against any and all claims, demands, suits, costs of defense, attorneys' fees, witness fees of any type, losses, damages, expenses, and liabilities, whether direct, indirect or consequential, related to, arising from, or in any way connected with:

- a. Customer's design, construction, installation, inspection, maintenance, testing or operation of Customer's generating system or equipment used in connection with this Interconnection Agreement, irrespective of any fault on the part of OEU.

(Continued on Sheet No. 22.6)

Issued by: Michael Poucher, P.E.  
Electric Utility Director

Effective: October 1, 2019

OCALA ELECTRIC UTILITY  
OCALA, FLORIDA  
(Continued from Sheet No. 22.5)

FIRST REVISED SHEET NO. 22.6  
CANCELS ORIGINAL SHEET NO. 22.6

- b. The interconnection of Customer's generating system with, and delivery of energy from the generating system to, OEU's electrical distribution system, irrespective of any fault on the part of OEU.
- c. The performance or nonperformance of Customer's obligations under this Interconnection Agreement or the obligations of any and all of the members of Customer's governing bodies and its officers, contractors (and any subcontractor or material supplier thereof), agents and employees.

Customer's obligations under this Section shall survive the termination of this Interconnection Agreement.

27. Customer shall not have the right to assign its benefits or obligations under this Agreement without OEU's prior written consent and such consent shall not be unreasonably withheld. If there is a change in ownership of the RGS, Customer shall provide written notice to OEU at least thirty (30) days prior to the change in ownership. The new owner will be required to assume, in writing, the Customer's rights and duties under this Agreement, or execute a new Standard Interconnection Agreement. The new owner shall not be permitted to net meter or begin parallel operations until the new owner assumes this Agreement or executes a new Agreement.

28. This Agreement supersedes all previous agreements and representations either written or verbal heretofore made between OEU and Customer with respect to matters herein contained. This Agreement, when duly executed, constitutes the only Agreement between parties hereto relative to the matters herein described. This Agreement shall continue in effect from year to year until either party gives sixty (60) days notice of its intent to terminate this Agreement.

29. This Agreement shall be governed by and construed and enforced in accordance with the laws, rules and regulations of the State of Florida and OEU's tariff as it may be modified, changed, or amended from time to time, including any amendments modification or changes to OEU's Net-Metering Service Rate Schedule, the schedule applicable to this Agreement. The Customer and OEU agree that any action, suit, or proceeding arising out of or relating to this Interconnection Agreement shall be initiated and prosecuted in the state court of competent jurisdiction located in Marion County, Florida, and OEU and the Customer irrevocably submit to the jurisdiction and venue of such court. To the fullest extent permitted by law, each Party hereby irrevocably waives any and all rights to a trial by jury and covenants and agrees that it will not request a trial by jury with respect to any legal proceeding arising out of or relating to this Interconnection Agreement.

None of the provisions of this Interconnection Agreement shall be considered waived by either Party except when such waiver is given in writing. No waiver by either Party of any one or more defaults in the performance of the provisions of this Interconnection Agreement shall operate or be construed as a waiver of any other existing or future default or defaults. If any one or more of the provisions of this Interconnection Agreement or the applicability of any provision to a

(Continued on Sheet No. 22.7)

Issued by: Michael Poucher, P.E.  
Electric Utility Director

Effective: October 1, 2019

OCALA ELECTRIC UTILITY  
OCALA, FLORIDA  
(Continued from Sheet No. 22.6)

FIRST REVISED SHEET NO. 22.7  
CANCELS ORIGINAL SHEET NO. 22.7

specific situation is held invalid or unenforceable, the provision shall be modified to the minimum extent necessary to make it or its application valid and enforceable, and the validity and enforceability of all other provisions of this Interconnection and all other applications of such provisions shall not be affected by any such invalidity or unenforceability. This Interconnection Agreement does not govern the terms and conditions for the delivery of power and energy to non-generating retail customers of OEU's electrical distribution system.

30. This Agreement incorporates by reference the terms of the tariff filed with the Florida Public Service Commission by OEU, including OEU's Net-Metering Service Rate Schedule, and associated technical terms and abbreviations, general rules and regulations and standard electric service requirements (as may be applicable) are incorporated by reference, as amended from time to time. To the extent of any conflict between this Agreement and such tariff, the tariff shall control.

31. OEU and Customer recognize that the Florida Statutes and/or the Florida Public Service Commission Rules, including those directly addressing the subject of this Agreement, may be amended from time to time. In the event that such statutes and/or rules are amended that affect the terms and conditions of this Agreement, OEU and Customer agree to supersede and replace this Agreement with a new Interconnection Agreement which complies with the amended statutes/rules.

32. Customer acknowledges that its provision of electricity to OEU hereunder is on a first-offered first-accepted basis and subject to diminution and/or rejection in the event the total amount of electricity delivered to OEU pursuant to the OEU's Net-Metering Service Rate Schedule (as filed with the Florida Public Service Commission), from all participating OEU customers, exceeds 2.5 percent (%) of the aggregate customer peak demand on OEU's electric system.

33. This Agreement is solely for the benefit of OEU and Customer and no right nor any cause of action shall accrue upon or by reason, to or for the benefit of any third party not a formal party to this Agreement. Nothing in this Agreement, expressed or implied, is intended or shall be construed to confer upon any person or corporation other than OEU or Customer, any right, remedy, or claim under or by reason of this Agreement or any of the provisions or conditions of this Agreement; and, all provisions, representations, covenants, and conditions contained in this Agreement shall inure to the sole benefit of and be binding upon OEU and Customer and their respective representatives, successors, and assigns. Further, no term or condition contained in this Agreement shall be construed in any way as a waiver by OEU of the sovereign immunity applicable to OEU as established by Florida Statutes, 768.28.

(Continued on Sheet No. 22.8)

Issued by: Michael Poucher, P.E.  
Electric Utility Director

Effective: October 1, 2019

**OCALA ELECTRIC UTILITY**  
**OCALA, FLORIDA**  
(Continued from Sheet No. 22.7)

**FIRST REVISED SHEET NO. 22.8**  
**CANCELS ORIGINAL SHEET NO. 22.8**

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

**OUS:**

By: Janice Mitchell  
Signed by:  
0510984385844E1  
Title: CFO  
Date: 8/14/2024

**Customer:**

By: Hugh Allen  
(Print Name)  
  
(Signature)  
Date: 8/12/24

**City of Ocala Electric Utility Account Number:**  
500935-250988

**Approved as to form and legality:**

DocuSigned by:  
William E. Sexton  
B07DCC48E8E429  
William E. Sexton, Esq.  
City Attorney

**Issued by:** Michael Poucher, P.E.  
Electric Utility Director

**Effective:** October 1, 2019



## HUDSON INSURANCE COMPANY

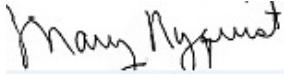
100 WILLIAM STREET 5TH FLOOR  
NEW YORK, NY 10038

### PERSONAL UMBRELLA LIABILITY POLICY PART TWO – POLICY DECLARATIONS

This Declarations Page along with "Policy Provisions – Part One" and any endorsements completes this Policy.

Policy Number:	PUMB0130542-00	G/A Number:	1000127	MYMGA.COM/PERSONALUMBRELLA.COM
Item 1: Insured's Name: HUGH ALLEN Mailing Address: 415 SE 39TH AVE OCALA, FL 34471		Producer's Name: CUTTS INSURANCE AGENCY Mailing Address: 4474 WOODBINE ROAD PACE, FL 32571		
Item 2: Policy Period (Month/Day/Year): From: 04/19/2024 To: 04/19/2025 At 12:01 A.M. Standard Time At Your Mailing Address Shown Above. Policy Term: 365 Days Prior Policy: New				
Item 3: Insured's Occupation: SALES Spouse/Other Occupation:				
Item 4: The Residence Premises Is Located At The Above Address Unless Otherwise Specified Below: Same As Mailing				

**IN RETURN FOR THE PAYMENT OF THE PREMIUM AND SUBJECT TO ALL TERMS AND ENDORSEMENTS OF THIS POLICY, WE AGREE WITH YOU TO PROVIDE THE INSURANCE COVERAGE AS STATED IN THIS POLICY.**

Item 5:	<b>Limits of Liability</b> (Defense Costs are provided outside this limit):										
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Bodily Injury, Personal Injury, and Property Damage Liability Coverage:</td> <td style="width: 50%;">\$ 1,000,000</td> </tr> <tr> <td>Uninsured/Underinsured Motorists Coverage:</td> <td>\$ EXCLUDED</td> </tr> <tr> <td>Identity Theft Coverage:</td> <td>\$ EXCLUDED</td> </tr> <tr> <td></td> <td>\$</td> </tr> </table>				Bodily Injury, Personal Injury, and Property Damage Liability Coverage:	\$ 1,000,000	Uninsured/Underinsured Motorists Coverage:	\$ EXCLUDED	Identity Theft Coverage:	\$ EXCLUDED		\$
Bodily Injury, Personal Injury, and Property Damage Liability Coverage:	\$ 1,000,000										
Uninsured/Underinsured Motorists Coverage:	\$ EXCLUDED										
Identity Theft Coverage:	\$ EXCLUDED										
	\$										
Item 6:	<b>Retained Limit (Self Insured Retention)</b>										
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Bodily Injury, Personal Injury, and Property Damage Liability Coverage:</td> <td style="width: 50%;">APPLICABLE UNDERLYING LIMITS</td> </tr> <tr> <td>Uninsured/Underinsured Motorists Coverage:</td> <td>SEE INSURING AGREEMENT, II</td> </tr> </table>		Bodily Injury, Personal Injury, and Property Damage Liability Coverage:	APPLICABLE UNDERLYING LIMITS	Uninsured/Underinsured Motorists Coverage:	SEE INSURING AGREEMENT, II						
Bodily Injury, Personal Injury, and Property Damage Liability Coverage:	APPLICABLE UNDERLYING LIMITS										
Uninsured/Underinsured Motorists Coverage:	SEE INSURING AGREEMENT, II										
Item 7:	<b>Schedule of Underlying Insurance</b>										
<p style="margin-left: 20px;">It is agreed by the Insured that insurance policies providing the following coverage: (1) Are in force and will be maintained in force (whether collectible or not) for at least the minimum underlying limits of liability stated hereafter; (2) Insure all automobiles owned, or leased by or regularly furnished to the insured; (3) Insure all premises owned, leased by, or leased to the insured; and (4) Insure all watercraft owned by the insured.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">TYPE OF COVERAGE</th> <th style="width: 50%;">MINIMUM UNDERLYING LIMITS</th> </tr> <tr> <td>Comprehensive Personal Liability or Homeowner's:</td> <td>SEE ATTACHED SCHEDULE – HUD-PUMB0006</td> </tr> <tr> <td>Automobile Liability:</td> <td>SEE ATTACHED SCHEDULE – HUD-PUMB0007</td> </tr> <tr> <td>Watercraft Liability:</td> <td>SEE ATTACHED SCHEDULE – HUD-PUMB0007</td> </tr> </table>				TYPE OF COVERAGE	MINIMUM UNDERLYING LIMITS	Comprehensive Personal Liability or Homeowner's:	SEE ATTACHED SCHEDULE – HUD-PUMB0006	Automobile Liability:	SEE ATTACHED SCHEDULE – HUD-PUMB0007	Watercraft Liability:	SEE ATTACHED SCHEDULE – HUD-PUMB0007
TYPE OF COVERAGE	MINIMUM UNDERLYING LIMITS										
Comprehensive Personal Liability or Homeowner's:	SEE ATTACHED SCHEDULE – HUD-PUMB0006										
Automobile Liability:	SEE ATTACHED SCHEDULE – HUD-PUMB0007										
Watercraft Liability:	SEE ATTACHED SCHEDULE – HUD-PUMB0007										
Endorsements forming a part of this policy (designated by Endorsement number)		Total Premium	\$ 222.00								
HUD-PUMB0002(08/11), HUD-PUMB0001(07/12)FL, HUD-PUMB0006(08/11), HUD-PUMB0007(08/11), HUD-PUMB0013T(08/11), HUD-PUMB0014(08/11), HUD-PUMB0021(08/11), HUD-PUMB0029(08/11)FL, FLPHNOTICE(9/13), HUDP2013, HUDP2013		Policy Fee	\$ 35.00								
		Surplus Lines Tax	\$								
		2022-1 FIGA	\$								
		2023-1 FIGA	\$ 2.22								
		Total Policy Premium	\$ 259.22								
<p>Date of Issue: 04/19/2024 Countersigned by:  _____ Licensed Resident Agent or Authorized Representative</p>											

This item has been digitally signed and sealed by Richard Patel, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



**BRILLIANT SOLAR**  
1433 HOOPER AVE, STE 212  
TOMS RIVER, NJ 08753

REVISIONS	DESCRIPTION	DATE	REV
INITIAL DESIGN		03/19/2024	
REVISION		05/07/2024	A
REVISION		05/15/2024	B
REVISION		05/16/2024	C



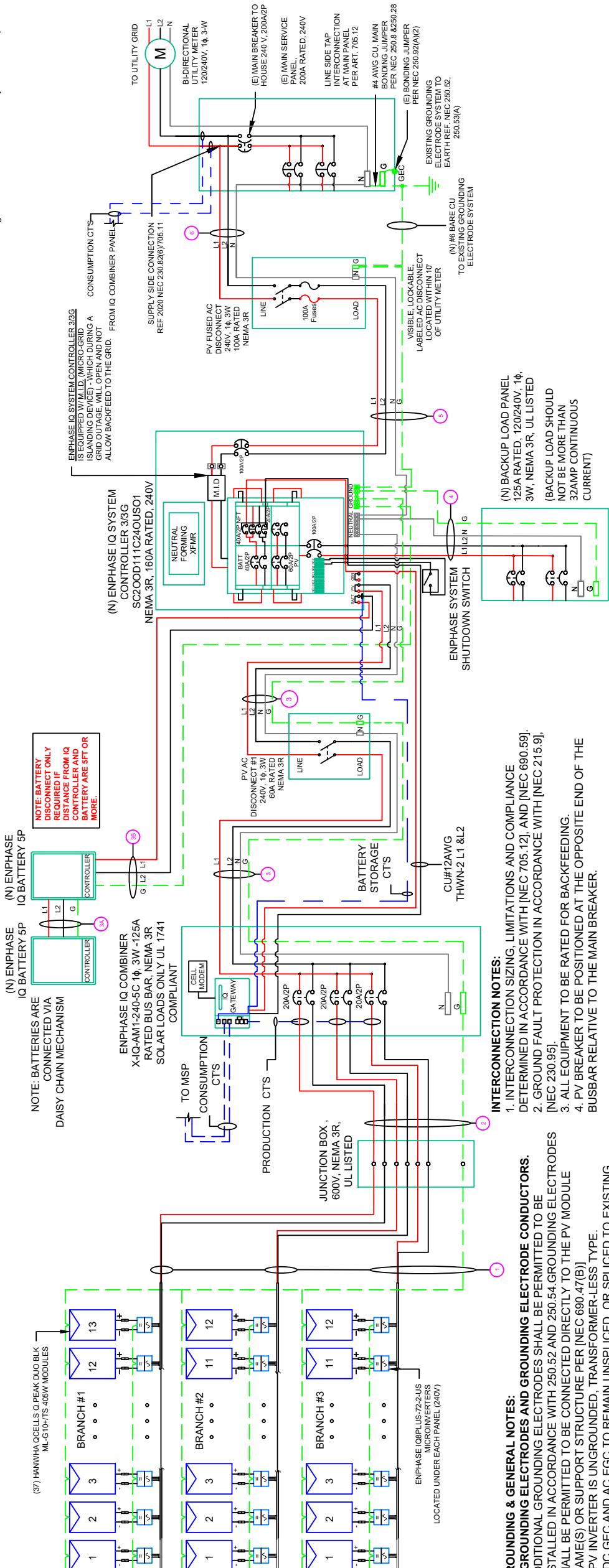
*RP*

Reviewed and approved  
Richard Panek, P.E.  
FL Lic. No. 73222  
5/16/2024



415 SE 39TH AVE,  
HUGH ALLEN  
RESIDENCE  
OCALA, FL 34471

ELECTRICAL LINE DIAGRAM	
SHEET SIZE	ANSI B 11" X 17"
SHEET NUMBER	E003



## GROUNDING & GENERAL NOTES: GROUNDING ELECTRODES AND G

ADDITIONAL GROUNDING ELECTRODES SHALL BE PERMITTED TO BE INSTALLED IN ACCORDANCE WITH 250.52 AND 250.54. GROUNDING ELECTRODES SHALL BE PERMITTED TO BE CONNECTED DIRECTLY TO THE PV MODULE NAME(S) OR SUPPORT STRUCTURE PER [NEC 690.47(B)]. PV INVERTER IS UNGROUNDED. TRANSFORMER-LESS TYPE. DC GEC AND AC EGC TO REMAIN UNSPLICED, OR SPLICED TO EXISTING ECTRODE

ANY EXISTING WIRING INVOLVED WITH PV SYSTEM CONNECTION THAT IS FOUND TO BE INADEQUATE PER CODE SHALL BE CORRECTED PRIOR TO FINAL SECTION.

JUNCTION BOXES QUANTITIES, AND PLACEMENT SUBJECT TO CHANGE IN THE FIELD - JUNCTION BOXES DEPICTED ON ELECTRICAL DIAGRAM REPRESENT WIRE PE TRANSITIONS.

AC DISCONNECT NOTED IN EQUIPMENT SCHEDULE OPTIONAL IF OTHER C DISCONNECT MEANS IS LOCATED WITHIN 10' OF SERVICE DISCONNECT.

RACEWAYS AND CABLES EXPOSED TO SUNLIGHT ON ROOFTOPS SHOULD BE INSTALLED MORE THAN 7 1/8" ABOVE THE ROOF USING CONDUIT SUPPORTS. ALL NEW SERVICE INSTALLATIONS AND REPLACEMENTS REQUIRE A SURGE-PROTECTIVE DEVICE (SPD) IN ACCORDANCE WITH [NEC 230.67]. THE D SHALL BE TYPE 1 OR TYPE 2 AND IS REQUIRED TO BE AN INTEGRAL PART OF THE SERVICE EQUIPMENT OR LOCATED IMMEDIATELY ADJACENT THERE TO.

2. GROUND FAULT PROTECTION IN ACCORDANCE WITH [NEC 215.9]. [NEC 230.95].

3. ALL EQUIPMENT TO BE RATED FOR BACKFEEDING.

4. PV BREAKER TO BE POSITIONED AT THE OPPOSITE END OF THE BUSBAR RELATIVE TO THE MAIN BREAKER.

**DISCONNECT NOTES.**

1. DISCONNECTING SWITCHES SHALL BE WIRED SUCH THAT WHEN THE SWITCH IS OPENED THE CONDUCTORS REMAINING LIVE ARE CONNECTED TO THE TERMINALS MARKED "LINE SIDE" (TYPICALLY THE UPPER TERMINALS).

2. AC DISCONNECT MUST BE ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH.

3. DISCONNECT MEANS AND THEIR LOCATION SHALL BE IN ACCORDANCE WITH [NEC 225.31] AND [NEC 225.32].

QTY	CONDUCTOR INFORMATION		CONDUIT TYPE	CONDUIT SIZE
	CONDUCTOR	ENGAGE CABLE		
(6)	CU#12AWG -	ENPHASE ENGAGE CABLE (L1 & L2 NO NEUTRAL)		N/A
(1)	CU #10AWG -	BARE COPPER IN FREE AIR		
(6)	CU#10AWG -	THWN-2 L1 &L2	EMT, ENT OR LFMC IN ATTIC	3/4"
(1)	CU #10AWG -	CU,THWN-2 GND		
(2)	CU #6AWG -	THWN-2 L1 &L2	EMT, LFMC OR PVC	3/4"
(1)	CU #6AWG -	CU,THWN-2 N		
(1)	CU #10AWG -	CU,THWN-2 GND		
(2)	CU #10AWG -	THWN-2 L1,L2	EMT, LFMC OR PVC	3/4"
(1)	CU #10AWG -	CU,THWN-2 GND		
(2)	CU #8AWG -	THWN-2 L1 &L2	EMT, LFMC OR PVC	3/4"
(1)	CU #10AWG -	CU,THWN-2 GND		
(3)	CU #3AWG -	THWN-2 L1,L2 & N	EMT, LFMC OR PVC	1"
(1)	CU #8AWG -	CU,THWN-2 GND		
(2)	CU #3AWG -	THWN-2 L1 &L2	EMT, LFMC OR PVC	1"
(1)	CU #3AWG -	CU,THWN-2 N		

SCALE: NTS

DC SYSTEM SIZE:  $37 \times 405 = 14.985\text{KW DC}$   
 AC SYSTEM SIZE:  $37 \times 290 = 10.730\text{KW AC}$

(37) HANWHA Q.PEAK DUO BLK ML-G10+TS 405W MONO MODULES  
 WITH (37) ENPHASE IQ8PLUS-72-2-US MICROINVERTERS  
 LOCATED UNDER EACH PANEL (240V)

(2) BRANCH CIRCUITS OF 12 MODULES AND  
 (1) BRANCH CIRCUIT OF 13 MODULES ARE CONNECTED IN PARALLEL



This item has been digitally signed and sealed by Richard Pantel, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

## IQ8 and IQ8+ Microinverters

DATA SHEET



ENPHASE.

## IQ8 and IQ8+ Microinverters

**Easy to install**

- Lightweight and compact with plug-n-play connectors
- Power Line Communication (PLC) between components
- Faster installation with simple two-wire cabling

**High productivity and reliability**

- Produce power even when the grid is down\*
- More than one million cumulative hours of testing
- Class II double-insulated enclosure
- Optimized for the latest high-powered PV modules

**Microgrid-forming**

- Complies with the latest advanced grid support\*\*
- Remote automatic updates for the latest grid requirements
- Configurable to support a wide range of grid profiles
- Meets CA Rule 21 (UL 1741-SA) requirements

**UL CERTIFIED**

**25** year limited warranty

**IQ8 Series** Microinverters redefine reliability standards with more than one million cumulative hours of power-on testing, enabling an industry-leading limited warranty of up to 25 years.

IQ8 Series Microinverters are UL Listed as PV Rapid Shut Down Equipment and conform with various regulations, when installed according to manufacturer's instructions.

Connect PV modules quickly and easily to IQ8 Series Microinverters using the included Q-CCC-2 adapter cable with plug-n-play MC4 connectors.

INPUT DATA [DC]		[Q8-60-2-US]		[Q8P-US-72-2-US]	
Commonly used module pairings <sup>1</sup>	W	60-cell/120 half-cell	66-cell/132 half-cell and 72-cell/144 half-cell	60-cell/120 half-cell	66-cell/132 half-cell and 72-cell/144 half-cell
Module compatibility		235 – 350		235 – 440	
MPPT voltage range	V	27 – 37		29 – 45	
Operating range	V	25 – 48		25 – 58	
Min/max start voltage	V	30 / 48		30 / 58	
Max input DC voltage	V	50		60	
Max DC current <sup>2</sup> [module sc]	A	15		15	
Overvoltage class DC port					
DC port backfeed current					
PV array configuration					
OUTPUT DATA [AC]		[Q8-60-2-US]		[Q8P-US-72-2-US]	
Peak output power	VA	245		300	
Max continuous output power	VA	240		290	
Nominal (L-L) voltage/range <sup>3</sup>	V	10		12	
Max continuous output current	A	60		60	
Nominal frequency	Hz	50 – 68		50 – 68	
Extended frequency range	Hz				
AC short circuit fault current over 3 cycles	Arms	2		2	
Max units per 20 A (L-L) branch circuit <sup>4</sup>		16		13	
Total harmonic distortion				<5%	
Overvoltage class AC port				III	
AC port backfeed current	mA			30	
Power factor setting				1.0	
Grid-tied power factor (adjustable)				0.85 leading – 0.85 lagging	
Peak efficiency	%	97.5		97.6	
CEC weighted efficiency	%	97		97	
Night-time power consumption	mW			60	

- Produce power even when the grid is down\*
- More than one million cumulative hours of testing
- Class II double-insulated enclosure
- Optimized for the latest high-powered PV modules

### High productivity and reliability

- Produce power even when the grid is down\*
- More than one million cumulative hours of testing
- Class II double-insulated enclosure

### Microgrid-forming

- Complies with the latest advanced grid support\*\*
- Remote automatic updates for the latest grid requirements
- Configurable to support a wide range of grid profiles
- Meets CA Rule 21 (UL 1741-SA) requirements

### UL CERTIFIED

25 year limited warranty

IQ8 Series Microinverters are UL Listed as PV Rapid Shut Down Equipment and conform with various regulations, when installed according to manufacturer's instructions.



IQ8 Series Microinverters are UL Listed as PV Rapid Shut Down Equipment and conform with various regulations, when installed according to manufacturer's instructions.

IQ8 Series Microinverters are UL Listed as PV Rapid Shut Down Equipment and conform with various regulations, when installed according to manufacturer's instructions.

IQ8 Series Microinverters are UL Listed as PV Rapid Shut Down Equipment and conform with various regulations, when installed according to manufacturer's instructions.

- Only when installed with IQ System Controller 2, meets UL 1741.
- IQ8 and IQ8P supports split phase, 240V installations only.

- No enforced DC/AC ratio. See the compatibility calculator at <https://link.enphase.com/module-compatibility>
- Maximum continuous input DC current is 10.6A (3 Nominal voltage range can be extended beyond nominal if required by the utility. (4) Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

IQ8P-DS-0002-01-EN-US-2022-03-17

IQ8SP-DS-0002-01-EN-US-2022-03-17

IQ8SP-DS-0002-01-EN-US-2022-03-17

IQ8SP-DS-0002-01-EN-US-2022-03-17

IQ8SP-DS-0002-01-EN-US-2022-03-17

**BRILLIANT SOLAR**  
1433 HOOPER AVE, STE 212  
TOMS RIVER, NJ 08753



REVISIONS		
DESCRIPTION	DATE	REV
INITIAL DESIGN	03/19/2024	A
REVISION	05/07/2024	A
REVISION	05/15/2024	B
REVISION	05/16/2024	C

REVIEWED AND APPROVED	
Richard Pantel, P.E.	FL Lic. No. 73222

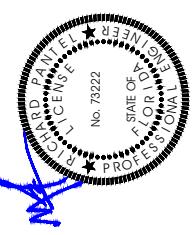
<b>PROJECT NAME &amp; ADDRESS</b>	<b>415 SE 39TH AVE, FL 34471, HUGH ALLEN RESIDENCE</b>
<b>DRAWN BY</b>	<b>ESR</b>
<b>SHEET NAME</b>	<b>MICROINVERTER DATASHEET</b>
<b>SHEET SIZE</b>	<b>11" X 17"</b>
<b>SHEET NUMBER</b>	<b>PD002</b>

This item has been digitally signed and sealed by Richard Pantel, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



**BRILLIANT SOLAR**  
1433 HOOPER AVE, STE 212  
TOMS RIVER, NJ 08753

REVISIONS		
DESCRIPTION	DATE	REV
INITIAL DESIGN	03/19/2024	A
REVISION	05/07/2024	A
REVISION	05/15/2024	B
REVISION	05/16/2024	C



Reviewed and approved  
Richard Pantel, P.E.  
FL Lic. No. 73222  
5/16/2024

415 SE 39TH AVE,  
OCALLA, FL 34471

HUGH ALLEN  
RESIDENCE

DRAWN BY	ESR
----------	-----

SHEET NAME	MODULE DATASHEET
------------	------------------

SHEET SIZE	ANSI B 11" X 17"
------------	---------------------

SHEET NUMBER	PD001
--------------	-------

qcells

## Q.PEAK DUO BLK ML-G10+ SERIES

### Mechanical Specification

Format	74.4 in $\times$ 41.2 in $\times$ 1.57 in (including frame) (1890 mm $\times$ 1046 mm $\times$ 40 mm)
Weight	51.8 lbs (23.5 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodized aluminum
Cell	6 $\times$ 22 monocrystalline Q.ANTUM solar half cells
Junction box	2.09-3.98 in $\times$ 1.26-2.36 in $\times$ 0.59-0.71 in (53-101 mm $\times$ 32-50 mm $\times$ 15-18 mm), IP67, with bypass diodes
Cable	4 mm <sup>2</sup> Solar cable; (+) $\geq$ 52.2 in (1325 mm); (-) $\geq$ 52.2 in (1325 mm)
Connector	Solar M4; IP68

### Electrical Characteristics

#### POWER CLASS

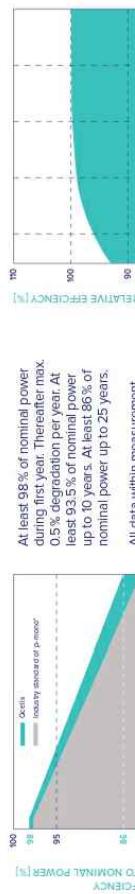
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC (POWER TOLERANCE +5W/-0W)	
Power at MPP <sup>1</sup>	P <sub>MPP</sub> [W]
Short Circuit Current <sup>1</sup>	I <sub>SC</sub> [A]
Open Circuit Voltage <sup>1</sup>	V <sub>OC</sub> [V]
Current at MPP	I <sub>MPP</sub> [A]
Voltage at MPP	V <sub>MPP</sub> [V]
Efficiency <sup>1</sup>	η [%]

#### MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT<sup>2</sup>

Power at MPP	P <sub>MPP</sub> [W]
Short Circuit Current	I <sub>SC</sub> [A]
Open Circuit Voltage	V <sub>OC</sub> [V]
Current at MPP	I <sub>MPP</sub> [A]
Voltage at MPP	V <sub>MPP</sub> [V]

Measurement tolerances P<sub>MPP</sub>  $\pm$  3%; I<sub>SC</sub> V<sub>OC</sub>  $\pm$  1.5% at STC: 1000 W/m<sup>2</sup>, 25.2 °C, AM 1.5 according to IEC 60904-3, 2800 W/m<sup>2</sup>, NMOT, Spectrum AM 1.5

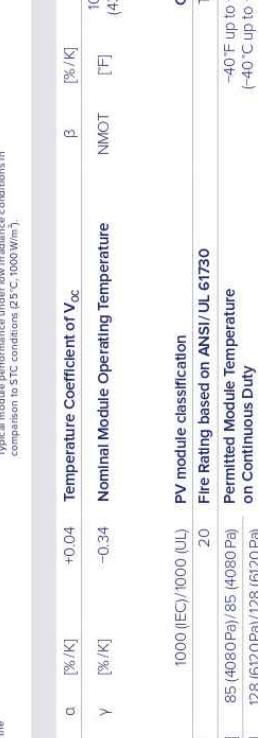
### Qcells PERFORMANCE WARRANTY



Standard terms of guarantee for the PV component with the highest production capacity in Q2021 (February 2021)

Typical module performance under low irradiance conditions in comparison to STC conditions (25°C, 1000 W/m<sup>2</sup>)

#### PERFORMANCE AT LOW IRRADIANCE



#### TEMPERATURE COEFFICIENTS

##### TEMPERATURE COEFFICIENT OF I<sub>SC</sub>

##### TEMPERATURE COEFFICIENT OF P<sub>MPP</sub>

##### MAX. SYSTEM VOLTAGE

##### MAX. SERIES FUSE RATING

##### MAX. DESIGN LOAD, PUSH/PULL<sup>3</sup>

##### MAX. TEST LOAD, PUSH/PULL<sup>3</sup>

#### PROPERTIES FOR SYSTEM DESIGN

##### MAX. MODULE CLASSIFICATION

##### MAX. MODULE RATING

##### PERMITTED MODULE TEMPERATURE

##### ON CONTINUOUS DUTY

Qcells pursues minimizing paper output in consideration of the global environment.

Note: Installation instructions must be followed. Contact our technical service for further information. Tel: +1 949 748 59 96 Email: hq-inquiry@qcells.com | Web: www.qcells.com



qcells

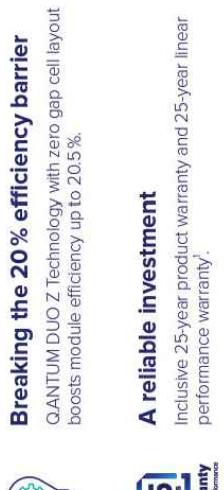
## Q.PEAK DUO BLK ML-G10+ SERIES

**385-405Wp | 132 Cells**  
**20.5% Maximum Module Efficiency**

MODEL Q.PEAK DUO BLK ML-G10+/TS



385-405Wp | 132 Cells  
20.5% Maximum Module Efficiency



Warranty  
25 years  
Protection & Performance

Enduring high performance

Long-term yield security with Anti LeID Technology,  
Anti PID Technology<sup>2</sup> and Hot-Spot Protect.

Innovative all-weather technology

Optimal yields, whatever the weather with excellent low-light  
and temperature behaviour.

Zep compatible™ frame design

High-tech black Zep Compatible frame, for improved  
aesthetics, easy installation and increased safety.

The most thorough testing  
programme in the industry

Qcells is the first solar module manufacturer to pass the  
most comprehensive quality programme in the industry. The  
new "Quality Controlled PV" of the independent certification  
Institute TÜV Rheinland.

See data sheet on rear for further information.  
<sup>2</sup> API test conditions according to IEC 62804-1/2015, method A (-1500V, 95%)



This item has been digitally signed and sealed by Richard Pantel, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



**BRILLIANT SOLAR**  
1433 HOOPER AVE, STE 212  
TOMS RIVER, NJ 08753



Reviewed and approved  
Richard Pantel, P.E.  
FL Lic. No. 73222  
5/16/2024

## IQ Combiner 5/5C

DATASHEET



DATA SHEET

MODEL NUMBER

IQ Combiner 5 (X-IQ-AM1-240-5)

IQ Combiner 5C (X-IQ-AM1-240-5C)

## WHAT'S IN THE BOX

X-IQ-AM1-240-5  
X-IQ-AM1-240-5C

Busbar

IQ Gateway breaker

Production CT

Consumption CT

IQ Battery CT

CTRI board

Enphase Mobile Connect (only with IQ Combiner 5C)

Accessories kit

## ACCESSORIES AND REPLACEMENT PARTS (NOT INCLUDED, ORDER SEPARATELY)

CELLMODEM-MI-06-SP-05

CELLMODEM-MI-06-AT-05

Circuit breakers (off-the-shelf)

Circuit breakers (provided by Enphase)

XA-SOLARSHIELD-ES

XA-ENV2-POBA-5

## ELECTRICAL SPECIFICATIONS

Rating

System voltage

Busbar rating

Fault current rating

Maximum continuous current rating (input from PV/storage)

Branch circuits (solar and/or storage)

Maximum total branch circuit breaker rating (input)

IQ Gateway breaker

Production metering CT

Consumption monitoring CT (CT-200-CLAMP)

IQ Battery metering CT

## Reliable

Durable NRTL-certified NEMA type 3R enclosure

5-year limited warranty

Two years labor reimbursement program coverage included for both the IQ Combiner SKUs

• UL1741 listed

## IQ Combiner 5/5C

The IQ Combiner 5/5C consolidates interconnection equipment into a single enclosure and streamlines IQ Series Microinverters and IQ Gateway installation by providing a consistent, pre-wired solution for residential applications. IQ Combiner 5/5C uses wired control communication and is compatible with IQ System Controller 3/3G and IQ Battery 5P.

The IQ Combiner 5/5C, along with IQ Series Microinverters, IQ System Controller 3/3G, and IQ Battery 5P provides you with a complete grid-agnostic Enphase Energy System.



**IQ System Controller 3/3G**  
Provides microgrid interconnection device (MID) functionality by automatically detecting grid failures and seamlessly transitioning the home energy system from grid power to backup power



**IQ Load Controller**  
Helps prioritize essential appliances during a grid outage to optimize energy consumption and prolong battery life



5-year limited warranty

© 2023 Enphase Energy. All rights reserved. Enphase, the e and CC logos, IQ, and certain other marks listed at <https://enphase.com/trademark-usage-guidelines> are trademarks of Enphase Energy, Inc. in the US and other countries. Data subject to change.

## ENPHASE

MODEL NUMBER	DESCRIPTION	DATE	REV
IQ Combiner 5 (X-IQ-AM1-240-5)	IQ Combiner 5 with IQ Gateway printed circuit board for integrated revenue grade PV production metering (ANSI C12.20 ±0.5%), consumption monitoring (±2.5%) and IQ Battery monitoring (±2.5%). Includes a silver solar shield to deflect heat	03/19/2024	A
IQ Combiner 5C (X-IQ-AM1-240-5C)	IQ Combiner 5C with IQ Gateway printed circuit board for integrated revenue grade PV production metering (ANSI C12.20 ±0.5%), consumption monitoring (±2.5%) and IQ Battery monitoring (±2.5%). Includes Enphase Mobile Connect cellular modem (CELLMODEM-MI-06-SP-05) <sup>1</sup> . Includes a silver solar shield to deflect heat	05/07/2024	B
WHAT'S IN THE BOX			
IQ Gateway printed circuit board	IQ Gateway is the platform for total energy management for comprehensive, remote maintenance and management of the Enphase IQ System		
Busbar	125A busbar with support for 1x IQ Gateway breaker and 4 x 20A breaker for installing IQ Series Microinverters and IQ Battery 5P		
IQ Gateway breaker	Circuit breaker, 2-pole, 10 A/15 A		
Production CT	Prewired revenue grade solid core CT, accurate up to 0.5%		
Consumption CT	Two consumption metering clamp CT's, shipped with the box, accurate up to 2.5%		
IQ Battery CT	One battery metering clamp CT, shipped with the box, accurate up to 2.5%		
CTRI board	Control board for wired communication with IQ System Controller 3/3G and the IQ Battery 5P		
Enphase Mobile Connect (only with IQ Combiner 5C)	4G-based LTE-M1 cellular modem (CELLMODEM-MI-06-SP-05) with a 5-year T-Mobile data plan		
Accessories kit	Spare control headers for CTRI board		
ACCESSORIES AND REPLACEMENT PARTS (NOT INCLUDED, ORDER SEPARATELY)			
CELLMODEM-MI-06-SP-05	4G-based LTE-M1 cellular modem with a 5-year T-Mobile data plan		
CELLMODEM-MI-06-AT-05	4G-based LTE-M1 cellular modem with a 5-year AT&T data plan		
Circuit breakers (off-the-shelf)	Supports Eaton BR220B, BR220C, BR220D, BR220E, BR220F, and BR260 circuit breakers		
Circuit breakers (provided by Enphase)	Supports Eaton BR220B, BR220C, BR220D, and BR260 circuit breakers compatible with hold-down kit BRK-10A-2P-240V, BRK-15A-2P-240V, BRK-15A-2P-240V-B, and BRK-20A-2P-240V-B (More details in "Accessories" section)		
XA-SOLARSHIELD-ES	Replacement solar shield for IQ Combiner 5/5C		
XA-ENV2-POBA-5	IQ Gateway replacement printed circuit board (PCB) for Combiner 5/5C		
X-A-NA-HD-125A	Hold-down kit compatible with Eaton BR-B series circuit breakers (with screws)		
Electrical Specifications			
Rating	80 A		
System voltage	120/240 VAC, 60 Hz		
Busbar rating	125 A		
Fault current rating	10 kAIC		
Maximum continuous current rating (input from PV/storage)	64 A		
Branch circuits (solar and/or storage)	Up to four 2-pole Eaton BR series distributed generation (DG) breakers only (not included)		
Maximum total branch circuit breaker rating (input)	80 A of distributed generation/95 A with IQ Gateway breaker included		
IQ Gateway breaker	10 A or 15 A rating GE/Siemens/Eaton included		
Production metering CT	200 A solid core pre-installed and wired to IQ Gateway		
Consumption monitoring CT (CT-200-CLAMP)	A pair of 200 A clamp-style current transformers is included with the box		
IQ Battery metering CT	200 A clamp-style current transformer for IQ Battery metering, included with the box		
WHAT'S IN THE BOX			
IQ Gateway printed circuit board	IQ Gateway is the platform for total energy management for comprehensive, remote maintenance and management of the Enphase IQ System		
Busbar	125A busbar with support for 1x IQ Gateway breaker and 4 x 20A breaker for installing IQ Series Microinverters and IQ Battery 5P		
IQ Gateway breaker	Circuit breaker, 2-pole, 10 A/15 A		
Production CT	Prewired revenue grade solid core CT, accurate up to 0.5%		
Consumption CT	Two consumption metering clamp CT's, shipped with the box, accurate up to 2.5%		
IQ Battery CT	One battery metering clamp CT, shipped with the box, accurate up to 2.5%		
CTRI board	Control board for wired communication with IQ System Controller 3/3G and the IQ Battery 5P		
Enphase Mobile Connect (only with IQ Combiner 5C)	4G-based LTE-M1 cellular modem (CELLMODEM-MI-06-SP-05) with a 5-year T-Mobile data plan		
Accessories kit	Spare control headers for CTRI board		
ACCESSORIES AND REPLACEMENT PARTS (NOT INCLUDED, ORDER SEPARATELY)			
CELLMODEM-MI-06-SP-05	4G-based LTE-M1 cellular modem with a 5-year T-Mobile data plan		
CELLMODEM-MI-06-AT-05	4G-based LTE-M1 cellular modem with a 5-year AT&T data plan		
Circuit breakers (off-the-shelf)	Supports Eaton BR220B, BR220C, BR220D, and BR260 circuit breakers		
Circuit breakers (provided by Enphase)	Supports Eaton BR220B, BR220C, BR220D, and BR260 circuit breakers compatible with hold-down kit BRK-10A-2P-240V, BRK-15A-2P-240V, BRK-15A-2P-240V-B, and BRK-20A-2P-240V-B (More details in "Accessories" section)		
XA-SOLARSHIELD-ES	Replacement solar shield for IQ Combiner 5/5C		
XA-ENV2-POBA-5	IQ Gateway replacement printed circuit board (PCB) for Combiner 5/5C		
X-A-NA-HD-125A	Hold-down kit compatible with Eaton BR-B series circuit breakers (with screws)		
Electrical Specifications			
Rating	80 A		
System voltage	120/240 VAC, 60 Hz		
Busbar rating	125 A		
Fault current rating	10 kAIC		
Maximum continuous current rating (input from PV/storage)	64 A		
Branch circuits (solar and/or storage)	Up to four 2-pole Eaton BR series distributed generation (DG) breakers only (not included)		
Maximum total branch circuit breaker rating (input)	80 A of distributed generation/95 A with IQ Gateway breaker included		
IQ Gateway breaker	10 A or 15 A rating GE/Siemens/Eaton included		
Production metering CT	200 A solid core pre-installed and wired to IQ Gateway		
Consumption monitoring CT (CT-200-CLAMP)	A pair of 200 A clamp-style current transformers is included with the box		
IQ Battery metering CT	200 A clamp-style current transformer for IQ Battery metering, included with the box		
WHAT'S IN THE BOX			
IQ Gateway printed circuit board	IQ Gateway is the platform for total energy management for comprehensive, remote maintenance and management of the Enphase IQ System		
Busbar	125A busbar with support for 1x IQ Gateway breaker and 4 x 20A breaker for installing IQ Series Microinverters and IQ Battery 5P		
IQ Gateway breaker	Circuit breaker, 2-pole, 10 A/15 A		
Production CT	Prewired revenue grade solid core CT, accurate up to 0.5%		
Consumption CT	Two consumption metering clamp CT's, shipped with the box, accurate up to 2.5%		
IQ Battery CT	One battery metering clamp CT, shipped with the box, accurate up to 2.5%		
CTRI board	Control board for wired communication with IQ System Controller 3/3G and the IQ Battery 5P		
Enphase Mobile Connect (only with IQ Combiner 5C)	4G-based LTE-M1 cellular modem (CELLMODEM-MI-06-SP-05) with a 5-year T-Mobile data plan		
Accessories kit	Spare control headers for CTRI board		
ACCESSORIES AND REPLACEMENT PARTS (NOT INCLUDED, ORDER SEPARATELY)			
CELLMODEM-MI-06-SP-05	4G-based LTE-M1 cellular modem with a 5-year T-Mobile data plan		
CELLMODEM-MI-06-AT-05	4G-based LTE-M1 cellular modem with a 5-year AT&T data plan		
Circuit breakers (off-the-shelf)	Supports Eaton BR220B, BR220C, BR220D, and BR260 circuit breakers		
Circuit breakers (provided by Enphase)	Supports Eaton BR220B, BR220C, BR220D, and BR260 circuit breakers compatible with hold-down kit BRK-10A-2P-240V, BRK-15A-2P-240V, BRK-15A-2P-240V-B, and BRK-20A-2P-240V-B (More details in "Accessories" section)		
XA-SOLARSHIELD-ES	Replacement solar shield for IQ Combiner 5/5C		
XA-ENV2-POBA-5	IQ Gateway replacement printed circuit board (PCB) for Combiner 5/5C		
X-A-NA-HD-125A	Hold-down kit compatible with Eaton BR-B series circuit breakers (with screws)		
Electrical Specifications			
Rating	80 A		
System voltage	120/240 VAC, 60 Hz		
Busbar rating	125 A		
Fault current rating	10 kAIC		
Maximum continuous current rating (input from PV/storage)	64 A		
Branch circuits (solar and/or storage)	Up to four 2-pole Eaton BR series distributed generation (DG) breakers only (not included)		
Maximum total branch circuit breaker rating (input)	80 A of distributed generation/95 A with IQ Gateway breaker included		
IQ Gateway breaker	10 A or 15 A rating GE/Siemens/Eaton included		
Production metering CT	200 A solid core pre-installed and wired to IQ Gateway		
Consumption monitoring CT (CT-200-CLAMP)	A pair of 200 A clamp-style current transformers is included with the box		
IQ Battery metering CT	200 A clamp-style current transformer for IQ Battery metering, included with the box		
WHAT'S IN THE BOX			
IQ Gateway printed circuit board	IQ Gateway is the platform for total energy management for comprehensive, remote maintenance and management of the Enphase IQ System		
Busbar	125A busbar with support for 1x IQ Gateway breaker and 4 x 20A breaker for installing IQ Series Microinverters and IQ Battery 5P		
IQ Gateway breaker	Circuit breaker, 2-pole, 10 A/15 A		
Production CT	Prewired revenue grade solid core CT, accurate up to 0.5%		
Consumption CT	Two consumption metering clamp CT's, shipped with the box, accurate up to 2.5%		
IQ Battery CT	One battery metering clamp CT, shipped with the box, accurate up to 2.5%		
CTRI board	Control board for wired communication with IQ System Controller 3/3G and the IQ Battery 5P		
Enphase Mobile Connect (only with IQ Combiner 5C)	4G-based LTE-M1 cellular modem (CELLMODEM-MI-06-SP-05) with a		

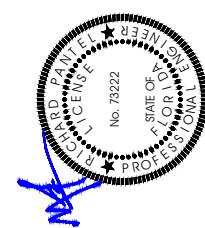
This item has been digitally signed and sealed by Richard Pantel, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



**BRILLIANT SOLAR**  
1433 HOOPER AVE, STE 212  
TOMS RIVER, NJ 08753

## REVISIONS

DESCRIPTION	DATE	REV
INITIAL DESIGN	03/19/2024	A
REVISION	05/07/2024	B
REVISION	05/15/2024	B
REVISION	05/16/2024	C



Reviewed and approved  
Richard Pantel, P.E.  
FL Lic. No. 73222  
5/16/2024

415 SE 39TH AVE,  
OCALLA, FL 34471

HUGH ALLEN  
RESIDENCE

## Accessories



## Circuit breakers

BRK-10A-2-240V Circuit breaker, 2-pole, 10 A, Eaton BR210  
BRK-15A-2-240V Circuit breaker, 2-pole, 15 A, Eaton BR215  
BRK-20A-2P-240V Circuit breaker, 2-pole, 20 A, Eaton BR220  
BRK-15A-2P-240V-B Circuit breaker, 2-pole, 15 A, Eaton BR215B  
with hold-down kit support  
BRK-20A-2P-240V-B Circuit breaker, 2-pole, 20 A, Eaton BR220B with hold-down kit support

## Enphase Mobile Connect

4G-based LTE-M cellular modem with a 5-year  
data plan  
CELLMODEM-MI-06-SP-05 for Sprint and  
CELLMODEM-MI-06-AT-05 for AT&T



## CT-200-SOLID

200 A revenue grade solid core Production CT  
with <0.5% error rate (replacement SKU)



## CT-200-CLAMP

200 A clamp-style consumption and battery  
metering CT with <2.5% error rate (replacement  
SKU)



MECHANICAL DATA		PROJECT NAME & ADDRESS	
Dimensions (WxHxD)	37.5 cm x 49.5 cm x 16.8 cm (14.75" x 19.5" x 6.63") Height is 2106" (53.5 cm) with mounting brackets	415 SE 39TH AVE, OCALLA, FL 34471	
Weight	7.5 kg (16.5 lbs)		
Ambient temperature range	-40°C to 46°C (-40°F to 115°F)		
Cooling	Natural convection, plus heat shield		
Enclosure environmental rating	Outdoor, NRTL-certified, NEMA type 3R, polycarbonate construction		
Wire sizes	<ul style="list-style-type: none"> <li>20 A to 50 A breaker inputs: 14 to 4 AWG copper conductors</li> <li>60 A breaker branch input: 4 to 10 AWG copper conductors</li> <li>Main lug combined output: 10 to 2/0 AWG copper conductors</li> <li>Neutral and ground: 14 to 1/0 copper conductors</li> <li>Always follow local code requirements for conductor sizing</li> </ul>		
Communication (in-premise connectivity)	Built-in CTBU board for wired communication with IQ Battery 5P and IQ System Controller 3/3G. Integrated Power Line Communication for IQ Series Microinverters		
Altitude	Up to 2,600 meters (8,530 feet)		
COMMUNICATION INTERFACES			
Integrated WiFi	802.11b/g/n (dual band 2.4 GHz/5 GHz), for connecting the Enphase cloud via the internet		
Wi-Fi range (recommended)	10 m		
Bluetooth	BLE4.2, 10 m range to configure WiFi SSID		
Ethernet	Optional, 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included), for connecting to the Enphase Cloud via the internet		
Mobile Connect	CELLMODEM-MI-06-SP-05 or CELLMODEM-MI-06-AT-05 (included with IQ Combiner 5C)		
Digital I/O	Digital input/output for grid operator control		
USB 2.0	For Mobile Connect		
Access point (AP) mode	For connection between the IQ Gateway and a mobile device running the Enphase Installer App		
Metering ports	Up to Two Consumption CTs, one IQ Battery CT, and one Production CT		
Power line communication	90–110 kHz		
Web API	Refer to <a href="https://developer.v4.enphase.com">https://developer.v4.enphase.com</a>		
Local API	Refer to <a href="guide-for-local-api">guide for local API</a>		
COMPLIANCE			
IQ Combiner	UL 1741, CAN/CSA C22.2 No. 1071, Title 47 CFR, Part 15, Class B, ICES 003		
IQ Gateway	UL 60601-1/CAN/CSA 22.2 No. 61010-1, IEEE 1547:2013 (UL 1741-SB, 3rd Ed.) IEEE 2030.5/CSP Compliant Production metering: ANSI C12.20 accuracy class 0.5 (PV production)		
COMPATIBILITY			
IQ System Controller 3/3G	SC2000MIC240US01, SC2000MIC240US01		
IQ Battery 5P	IQBATTERY-5P-IP-NA		
Microinverter	IQ6, IQ7, and IQ8 Series Microinverters		

DRAWN BY  
ESR

Sheet Name  
CELL MODEM  
DATASHEET

Sheet Size  
ANSI B  
11" X 17"

Sheet Number  
PD004

IQC-5-5C-DSH-00007-2.0-EN-US-2023-09-27

IQC-5-5C-DSH-00007-2.0-EN-US-2023-09-27





**Certificate Of Completion**

Envelope Id: A243B228890849C19854E12096D60740

Status: Completed

Subject: FOR SIGNATURES-Net Metering Agreement\_ Hugh Allen (ELE/240978)

Source Envelope:

Document Pages: 28

Signatures: 5

Envelope Originator:

Certificate Pages: 5

Initials: 0

April Adolf

AutoNav: Enabled

Enveloped Stamping: Enabled

Time Zone: (UTC-05:00) Eastern Time (US &amp; Canada)

110 SE Watula Avenue

City Hall, Third Floor

Ocala, FL 34471

aadolf@ocalafl.gov

IP Address: 216.255.240.104

**Record Tracking**

Status: Original

8/13/2024 8:55:40 PM

Holder: April Adolf

Location: DocuSign

aadolf@ocalafl.gov

Security Appliance Status: Connected

Pool: StateLocal

Storage Appliance Status: Connected

Pool: City of Ocala - Procurement &amp; Contracting

Location: DocuSign

**Signer Events****Signature****Timestamp**

William E. Sexton

wsexton@ocalafl.org

City Attorney

City of Ocala

Security Level: Email, Account Authentication (None)

DocuSigned by:



William E. Sexton  
B07DCFC4E86E429...

Signature Adoption: Pre-selected Style  
Using IP Address: 216.255.240.104

Sent: 8/13/2024 9:07:01 PM

Viewed: 8/14/2024 8:32:25 AM

Signed: 8/14/2024 8:34:15 AM

**Electronic Record and Signature Disclosure:**

Not Offered via DocuSign

Janice Mitchell

jmitchell@Ocalafl.org

CFO

City of Ocala

Security Level: Email, Account Authentication (None)

Signed by:



Janice Mitchell  
55198B43858A4E1...

Signature Adoption: Pre-selected Style  
Using IP Address: 216.255.240.104

Sent: 8/14/2024 8:34:17 AM

Viewed: 8/14/2024 10:48:19 AM

Signed: 8/14/2024 10:49:10 AM

**Electronic Record and Signature Disclosure:**

Accepted: 8/14/2024 10:48:19 AM

ID: e0ece169-dc84-4c83-90ce-b5ac0e4c3ca3

Chris Gowder

chris.gowder@fmpa.com

VP of IT/OT and System Ops

Security Level: Email, Account Authentication (None)

DocuSigned by:



Chris Gowder  
087F58EBB34B474...

Signature Adoption: Uploaded Signature Image  
Using IP Address: 38.77.131.2

Sent: 8/14/2024 10:49:13 AM

Viewed: 8/14/2024 11:14:01 AM

Signed: 8/14/2024 11:14:14 AM

**Electronic Record and Signature Disclosure:**

Accepted: 8/14/2024 11:14:01 AM

ID: 5036c930-2c98-464f-aca8-f7d3472fc1d7

**In Person Signer Events****Signature****Timestamp****Editor Delivery Events****Status****Timestamp****Agent Delivery Events****Status****Timestamp****Intermediary Delivery Events****Status****Timestamp**

Certified Delivery Events	Status	Timestamp
Carbon Copy Events	Status	Timestamp
Witness Events	Signature	Timestamp
Notary Events	Signature	Timestamp
Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	8/13/2024 9:07:02 PM
Certified Delivered	Security Checked	8/14/2024 11:14:01 AM
Signing Complete	Security Checked	8/14/2024 11:14:14 AM
Completed	Security Checked	8/14/2024 11:14:14 AM
Payment Events	Status	Timestamps
Electronic Record and Signature Disclosure		

## **ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

From time to time, City of Ocala - Procurement & Contracting (we, us or Company) may be required by law to provide to you certain written notices or disclosures. Described below are the terms and conditions for providing to you such notices and disclosures electronically through the DocuSign system. Please read the information below carefully and thoroughly, and if you can access this information electronically to your satisfaction and agree to this Electronic Record and Signature Disclosure (ERSD), please confirm your agreement by selecting the check-box next to 'I agree to use electronic records and signatures' before clicking 'CONTINUE' within the DocuSign system.

### **Getting paper copies**

At any time, you may request from us a paper copy of any record provided or made available electronically to you by us. You will have the ability to download and print documents we send to you through the DocuSign system during and immediately after the signing session and, if you elect to create a DocuSign account, you may access the documents for a limited period of time (usually 30 days) after such documents are first sent to you. After such time, if you wish for us to send you paper copies of any such documents from our office to you, you will be charged a \$0.00 per-page fee. You may request delivery of such paper copies from us by following the procedure described below.

### **Withdrawing your consent**

If you decide to receive notices and disclosures from us electronically, you may at any time change your mind and tell us that thereafter you want to receive required notices and disclosures only in paper format. How you must inform us of your decision to receive future notices and disclosure in paper format and withdraw your consent to receive notices and disclosures electronically is described below.

### **Consequences of changing your mind**

If you elect to receive required notices and disclosures only in paper format, it will slow the speed at which we can complete certain steps in transactions with you and delivering services to you because we will need first to send the required notices or disclosures to you in paper format, and then wait until we receive back from you your acknowledgment of your receipt of such paper notices or disclosures. Further, you will no longer be able to use the DocuSign system to receive required notices and consents electronically from us or to sign electronically documents from us.

### **All notices and disclosures will be sent to you electronically**

Unless you tell us otherwise in accordance with the procedures described herein, we will provide electronically to you through the DocuSign system all required notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you during the course of our relationship with you. To reduce the chance of you inadvertently not receiving any notice or disclosure, we prefer to provide all of the required notices and disclosures to you by the same method and to the same address that you have given us. Thus, you can receive all the disclosures and notices electronically or in paper format through the paper mail delivery system. If you do not agree with this process, please let us know as described below. Please also see the paragraph immediately above that describes the consequences of your electing not to receive delivery of the notices and disclosures electronically from us.

**How to contact City of Ocala - Procurement & Contracting:**

You may contact us to let us know of your changes as to how we may contact you electronically, to request paper copies of certain information from us, and to withdraw your prior consent to receive notices and disclosures electronically as follows:

To contact us by email send messages to: [contracts@ocalafl.org](mailto:contracts@ocalafl.org)

**To advise City of Ocala - Procurement & Contracting of your new email address**

To let us know of a change in your email address where we should send notices and disclosures electronically to you, you must send an email message to us at [contracts@ocalafl.org](mailto:contracts@ocalafl.org) and in the body of such request you must state: your previous email address, your new email address. We do not require any other information from you to change your email address.

If you created a DocuSign account, you may update it with your new email address through your account preferences.

**To request paper copies from City of Ocala - Procurement & Contracting**

To request delivery from us of paper copies of the notices and disclosures previously provided by us to you electronically, you must send us an email to [contracts@ocalafl.org](mailto:contracts@ocalafl.org) and in the body of such request you must state your email address, full name, mailing address, and telephone number. We will bill you for any fees at that time, if any.

**To withdraw your consent with City of Ocala - Procurement & Contracting**

To inform us that you no longer wish to receive future notices and disclosures in electronic format you may:

- i. decline to sign a document from within your signing session, and on the subsequent page, select the check-box indicating you wish to withdraw your consent, or you may;
- ii. send us an email to contracts@ocalafl.org and in the body of such request you must state your email, full name, mailing address, and telephone number. We do not need any other information from you to withdraw consent.. The consequences of your withdrawing consent for online documents will be that transactions may take a longer time to process..

### **Required hardware and software**

The minimum system requirements for using the DocuSign system may change over time. The current system requirements are found here: <https://support.docusign.com/guides/signer-guide-signing-system-requirements>.

### **Acknowledging your access and consent to receive and sign documents electronically**

To confirm to us that you can access this information electronically, which will be similar to other electronic notices and disclosures that we will provide to you, please confirm that you have read this ERSD, and (i) that you are able to print on paper or electronically save this ERSD for your future reference and access; or (ii) that you are able to email this ERSD to an email address where you will be able to print on paper or save it for your future reference and access. Further, if you consent to receiving notices and disclosures exclusively in electronic format as described herein, then select the check-box next to 'I agree to use electronic records and signatures' before clicking 'CONTINUE' within the DocuSign system.

By selecting the check-box next to 'I agree to use electronic records and signatures', you confirm that:

- You can access and read this Electronic Record and Signature Disclosure; and
- You can print on paper this Electronic Record and Signature Disclosure, or save or send this Electronic Record and Disclosure to a location where you can print it, for future reference and access; and
- Until or unless you notify City of Ocala - Procurement & Contracting as described above, you consent to receive exclusively through electronic means all notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you by City of Ocala - Procurement & Contracting during the course of your relationship with City of Ocala - Procurement & Contracting.