

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: _____

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

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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.

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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 3rd 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

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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.

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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.

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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.

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

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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.

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

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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.

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

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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: Jamie Mitchell
Title: CFO
Date: 8/14/2024

Florida Municipal Power Agency

By: DocuSigned by: [Signature]
Title: VP of IT/OT and System Ops
Date: 8/14/2024

Customer

By: Hugh Allen Date: 6/12/24
(Print Name)
[Signature]
(Signature)

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

Approved as to form and legality:

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

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

Effective: October 1, 2019

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

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

- a) FMPPA 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 FMPPA as soon as it becomes available, but no later than the second working day of every month. FMPPA 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. FMPPA will update the Quarterly Energy Rate every April 1, July 1, October 1 and January 1.

- b) As part of the monthly bill adjustment, FMPPA will also increase OEU's kWh billing amount by the same kWh amount as the customer-owned renewable generation purchased by FMPPA. This adjustment is necessary because excess customer generation that flows onto OEU's electric system has been purchased by FMPPA, 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 FMPPA'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.

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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;

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Electric Utility Director

Effective: October 1, 2019

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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*.

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Electric Utility Director

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- 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.

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Electric Utility Director

Effective: October 1, 2019

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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.

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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

CONTRACT# ELE/240978

**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:

Customer:

By: Signed by:
Janice Mitchell

By: Hugh Allen
(Print Name)

Title: CFO


(Signature)

Date: 8/14/2024

Date: 8/12/24

City of Ocala Electric Utility Account Number:
500935-250988

Approved as to form and legality:

DocuSigned by:
William E. Sexton

**William E. Sexton, Esq.
City Attorney**

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

Effective: October 1, 2019

CONTRACT# ELE/240978



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:	Limits of Liability (Defense Costs are provided outside this limit):	
	Bodily Injury, Personal Injury, and Property Damage Liability Coverage:	\$ 1,000,000
	Uninsured/Underinsured Motorists Coverage:	\$ EXCLUDED
	Identity Theft Coverage:	\$ EXCLUDED
		\$
Item 6:	Retained Limit (Self Insured Retention)	
	Bodily Injury, Personal Injury, and Property Damage Liability Coverage:	APPLICABLE UNDERLYING LIMITS
	Uninsured/Underinsured Motorists Coverage:	SEE INSURING AGREEMENT, II
Item 7:	Schedule of Underlying Insurance	
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.		
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), HUDPN2013, HUDPP2013	Policy Fee	\$ 35.00
	Surplus Lines Tax	\$
	2022-1 FIGA	\$
	2023-1 FIGA	\$ 2.22
	Total Policy Premium	\$ 259.22

Date of Issue:

04/19/2024

Countersigned by:

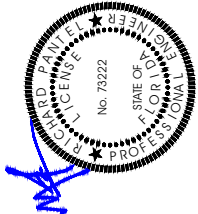
Licensed Resident Agent or Authorized Representative

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	
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

PROJECT NAME & ADDRESS

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

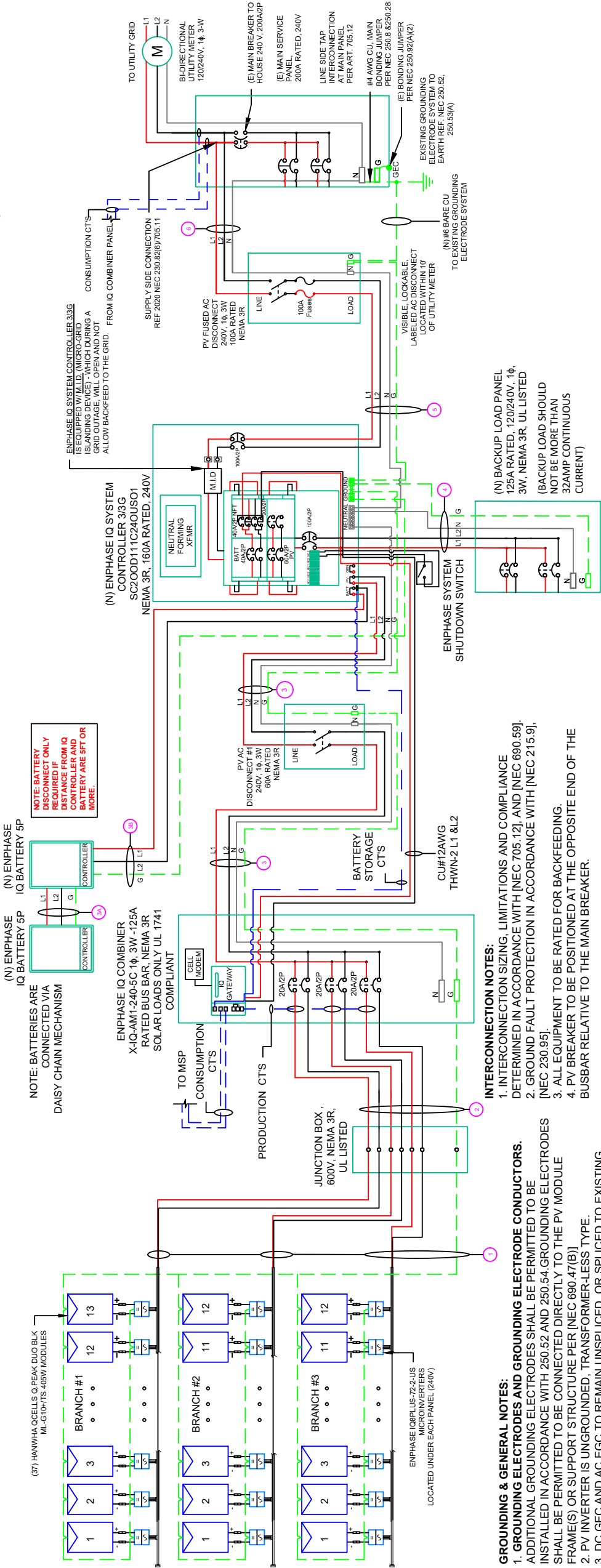
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ESR

SHEET NAME

ELECTRICAL LINE DIAGRAM

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
E003



INTERCONNECTION NOTES:

- INTERCONNECTION SIZING, LIMITATIONS AND COMPLIANCE DETERMINED IN ACCORDANCE WITH [NEC 705.12], AND [NEC 690.59].
- GROUND FAULT PROTECTION IN ACCORDANCE WITH [NEC 215.9], [NEC 230.95].
- ALL EQUIPMENT TO BE RATED FOR BACKFEEDING.
- PV BREAKER TO BE POSITIONED AT THE OPPOSITE END OF THE BUSBAR RELATIVE TO THE MAIN BREAKER.

DISCONNECT NOTES:

- 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)
- AC DISCONNECT MUST BE ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH
- DISCONNECT MEANS AND THEIR LOCATION SHALL BE IN ACCORDANCE WITH [NEC 225.31] AND [NEC 225.32].

GROUNDING & GENERAL NOTES:

- GROUNDING ELECTRODES AND GROUNDING ELECTRODE CONDUCTORS.**
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 FRAME(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 ELECTRODE
- ANY EXISTING WIRING INVOLVED WITH PV SYSTEM CONNECTION THAT IS FOUND TO BE INADEQUATE PER CODE SHALL BE CORRECTED PRIOR TO FINAL INSPECTION.
- JUNCTION BOXES QUANTITIES, AND PLACEMENT SUBJECT TO CHANGE IN THE FIELD - JUNCTION BOXES DEPICTED ON ELECTRICAL DIAGRAM REPRESENT WIRE TYPE TRANSITIONS.
- AC DISCONNECT NOTED IN EQUIPMENT SCHEDULE OPTIONAL IF OTHER AC DISCONNECTING MEANS IS LOCATED WITHIN 10' OF SERVICE DISCONNECT.
- RACEWAYS AND CABLES EXPOSED TO SUNLIGHT ON ROOFTOPS SHOULD BE INSTALLED MORE THAN 78" 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 SPD SHALL BE TYPE 1 OR TYPE 2 AND IS REQUIRED TO BE AN INTEGRAL PART OF THE SERVICE EQUIPMENT OR LOCATED IMMEDIATELY ADJACENT THERETO.

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

DC SYSTEM SIZE: 37 x 405 = 14.985KW DC
AC SYSTEM SIZE: 37 x 290 = 10.730KW AC
(37) HANWHA QCELLS 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

1 ELECTRICAL LINE DIAGRAM

SCALE: NTS

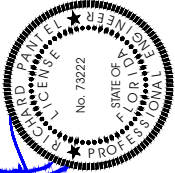
E003

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

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

PROJECT NAME & ADDRESS

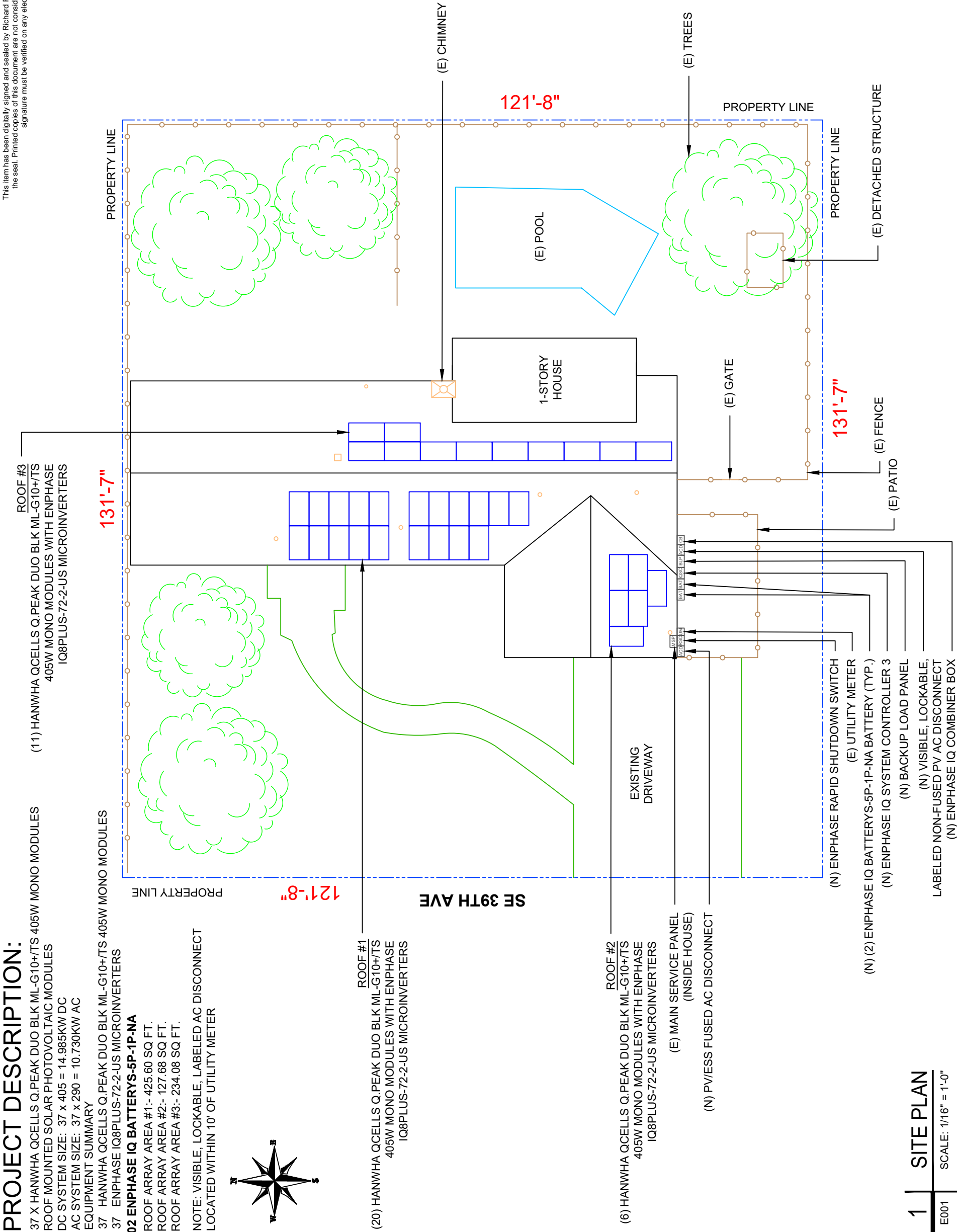
HUGH ALLEN
RESIDENCE
415 SE 39TH AVE,
OCALA, FL 34471

DRAWN BY
ESR

SHEET NAME
SITE PLAN

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
E001

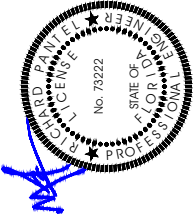


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BRILLIANT SOLAR
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TOMS RIVER, NJ 08753

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

PROJECT NAME & ADDRESS

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

DRAWN BY
ESR

SHEET NAME
MICROINVERTER
DATASHEET

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PD002

IQ8 and IQ8+ Microinverters

INPUT DATA (DC)		108-60-2-US	108PLUS-72-2-US
Commonly used module pairings ¹	W	235 – 350	235 – 440
Module compatibility		60-cell/120 half-cell	60-cell/120 half-cell, 66-cell/132 half-cell and 72-cell/144 half-cell
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 ² [module Isc]	A		15
Overvoltage class DC port			II
DC port backfeed current	mA		0
PV array configuration		1x1 Ungrounded array; No additional DC side protection required; AC side protection requires max 20A per branch circuit	
OUTPUT DATA (AC)		108-60-2-US	108PLUS-72-2-US
Peak output power	VA	245	300
Max continuous output power	VA	240	290
Nominal (L-L) voltage/range ³	V		240 / 211 – 264
Max continuous output current	A	1.0	1.21
Nominal frequency	Hz		60
Extended frequency range	Hz		50 – 68
AC short circuit fault current over 3 cycles	Amps		2
Max units per 20 A (L-L) branch circuit ⁴		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
MECHANICAL DATA			
Ambient temperature range		–40°C to +60°C (–40°F to +140°F)	
Relative humidity range		4% to 100% (condensing)	
DC Connector type		MC4	
Dimensions (HxWxD)		212 mm (8.3") x 175 mm (6.9") x 30.2 mm (1.2")	
Weight		108 kg (2.38 lbs)	
Cooling		Natural convection – no fans	
Approved for wet locations		Yes	
Pollution degree		PD3	
Enclosure		Class II double-insulated, corrosion resistant polymeric enclosure	
Environ. category / UV exposure rating		NEMA Type 6 / outdoor	
COMPLIANCE			
Certifications		CA Rule 21 (UL 1741-SA), UL 62109-1, UL1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 1071-01 This product is UL Listed as PV Rapid Shut Down Equipment and conforms with NEC 2014, NEC 2017, and NEC 2020 section 690.12 and C22.1-2018 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according to manufacturer's instructions.	

(1) No enforced DC/AC ratio. See the compatibility calculator at <https://link.enphase.com/module-compatibility>
(2) 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.

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



DATA SHEET



IQ8 and IQ8+ Microinverters

Our newest IQ8 Microinverters are the industry's first microgrid-forming, software-defined microinverters with split-phase power conversion capability to convert DC power to AC power efficiently. The brain of the semiconductor-based microinverter is our proprietary application-specific integrated circuit (ASIC) which enables the microinverter to operate in grid-tied or off-grid modes. This chip is built in advanced 55nm technology with high speed digital logic and has super-fast response times to changing loads and grid events, alleviating constraints on battery sizing for home energy systems.



Part of the Enphase Energy System, IQ8 Series Microinverters integrate with the Enphase IQ Battery, Enphase IQ Gateway, and the Enphase App monitoring and analysis software.



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



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.

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

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

* Only when installed with IQ System Controller 2, meets UL 1741.
** IQ8 and IQ8Plus supports split phase, 240V installations only.

qcells

1433 HOOPER AVE, STE 212
TOMS RIVER, NJ 08753

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■ Electrical Characteristics

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

FL Lic. No. 73222
5/16/2024

PROJECT NAME & ADDRESS

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Rooftop arrays on commercial/industrial


 TÜV Rheinland
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 Quality
 Controlled PV
 www.tuv.com
 10.1111228415
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 PV MODULE
 2022
 ISO 9001:2015



Note: Installation instructions must be followed. Contact our technical service for further information on approved installation of this product.

Hanwha Q CELLS America Inc. 400 Spectrum Center Drive, Suite #400, Irvine, CA 92618 USA | TEL +1-949-748-59-96 | EMAIL hqc-inquiry@qcells.com | WEB www.qcells.com

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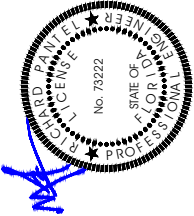
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BRILLIANT SOLAR
1433 HOOPER AVE, STE 212
TOMS RIVER, NJ 08753

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



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

PROJECT NAME & ADDRESS

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

DRAWN BY
ESR

SHEET NAME
COMBINER BOX
DATASHEET

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PD003

IQ Combiner 5/5C

MODEL NUMBER	
IQ Combiner 5 (X-IQ-AMI-240-5)	IQ Combiner 5 with IQ Gateway printed circuit board for integrated revenue grade PV production metering (ANSIC12.20 ±0.5%), consumption monitoring (± 2.5%) and IQ Battery monitoring (±2.5%). Includes a silver solar shield to deflect heat
IQ Combiner 5C (X-IQ-AMI-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-M1-06-SP-05). Includes a silver solar shield to deflect heat
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 1 x IQ Gateway breaker and 4 x 20A breaker for installing IQ Series Microinverters and IQ Battery SP
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 CTs, 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%
CTRL board	Control board for wired communication with IQ System Controller 3/3G and the IQ Battery SP
Enphase Mobile Connect (only with IQ Combiner 5C)	4G-based LTE-M1 cellular modem (CELLMODEM-M1-06-SP-05) with a 5-year T-Mobile data plan
Accessories kit	Spare control headers for CTRL board
ACCESSORIES AND REPLACEMENT PARTS (NOT INCLUDED, ORDER SEPARATELY)	
CELLMODEM-M1-06-SP-05	4G-based LTE-M1 cellular modem with a 5-year T-Mobile data plan
CELLMODEM-M1-06-AT-05	4G-based LTE-M1 cellular modem with a 5-year AT&T data plan
Circuit breakers (off-the-shelf)	Supports Eaton BR210, BR215, BR220, BR230, BR240, BR250, and BR260 circuit breakers Supports Eaton BR220B, BR230B, and BR240B circuit breakers compatible with hold-down kit
Circuit breakers (provided by Enphase)	BRK-10A-2-240V, BRK-15A-2-240V, BRK-20A-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-ENVZ-PCBA-5	IQ Gateway replacement printed circuit board (PCB) for Combiner 5/5C
X-IQ-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

* A plug-and-play industrial-grade cell modem for systems up to 60 microinverters. (Available in the US, Canada, Mexico, Puerto Rico, and the US Virgin Islands, where there is adequate cellular service in the installation area.)

DATASHEET



X-IQ-AMI-240-5
X-IQ-AMI-240-5C

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 SP.

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



IQ Series Microinverters

The high-powered smart grid-ready IQ Series Microinverters (IQ6, IQ7, and IQ8 Series) dramatically simplify the installation process



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 Battery 5P

Fully integrated AC battery system. Includes six field-replaceable IQ8D-BAT Microinverters



IQ Load Controller

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

Smart

- Includes IQ Gateway for communication and control
- Includes Enphase Mobile Connect (CELLMODEM-M1-06-SP-05), only with IQ Combiner 5C
- Supports flexible networking: Wi-Fi, Ethernet, or cellular
- Provides production metering (revenue grade) and consumption monitoring

Easy to install

- Mounts to one stud with centered brackets
- Supports bottom, back, and side conduit entry
- Supports up to four 2-pole branch circuits for 240 VAC plug-in breakers (not included)
- 80 A total PV branch circuits
- Bluetooth-based Wi-Fi provisioning for easy Wi-Fi setup

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



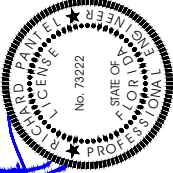
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FL Lic. No. 73222
5/16/2024

PROJECT NAME & ADDRESS

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

DRAWN BY ESR
SHEET NAME CELL MODEM DATASHEET
SHEET SIZE ANSI B 11" X 17"
SHEET NUMBER PD004

Accessories



Enphase Mobile Connect
4G-based LTE-M cellular modem with a 5-year data plan
(CELLMODEM-MH-06-SP-05 for Sprint and CELLMODEM-MH-06-A1-05 for AT&T)



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



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	
Dimensions (WxHxD)	37.5 cm x 49.5 cm x 16.8 cm (14.75" x 19.5" x 6.63"). Height is 21.06" (53.5 cm) with mounting brackets
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">20 A to 50 A breaker inputs: 14 to 4 AWG copper conductors60 A breaker branch input: 4 to 1/0 AWG copper conductorsMain lug combined output: 10 to 2/0 AWG copper conductorsNeutral and ground: 14 to 1/0 copper conductorsAlways follow local code requirements for conductor sizing
Communication (In-premise connectivity)	Built-in CTPL board for wired communication with IQ Battery SP 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 Wi-Fi	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 Wi-Fi 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-MH-06-SP-05 or CELLMODEM-MH-06-A1-05 (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 https://developer-v4.enphase.com
Local API	Refer to guide for local API
COMPLIANCE	
IQ Combiner	UL 1741, CAN/CSA C22.2 No. 107.1, Title 47 CFR, Part 15, Class B, ICES 003
IQ Gateway	UL 60601-1/CANCSA 22.2 No. 61010-1, IEEE 1547, 2018 (UL 1741-SB, 3 rd Ed.) IEEE 2030.5/CSP Compliant Production metering: ANSI C12.20 accuracy class 0.5 (PV production)
COMPATIBILITY	
IQ System Controller 3/3G	SC200D11C240US01, SC200G11C240US01
IQ Battery SP	IQBATTERY-5P-IP-NA
Microinverter	IQ6, IQ7, and IQ8 Series Microinverters

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PROJECT NAME & ADDRESS

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

DRAWN BY
ESR

SHEET NAME
SYSTEM CONTROLLER
DATASHEET

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PD005

DATASHEET

ELECTRICAL SPECIFICATIONS	
Maximum overcurrent protection device rating for PV combiner unit	80 A
Internal busbar rating	200 A
Neutral-forming transformer (NFT)	<ul style="list-style-type: none">Breaker rating (pre-installed): 40 A between L1 and Neutral; 40 A between L2 and NeutralContinuous rated power: 3,600 VAMaximum continuous ampacity current: 30 A @ 120 VPeak inrush current: 50 A @ 120 V for two seconds
PHYSICAL DATA	
Dimensions (WxHxD)	50 cm x 91.6 cm x 24.6 cm (19.7 in x 3.8 in x 9.7 in)
Weight	39.4 kg (87 lbs)
Ambient temperature range	-40°C to 50°C (-40°F to 122°F)
Cooling	Natural convection and a heat shield
Enclosure environmental rating	Outdoor, NEMA type 3R, polycarbonate construction
Maximum altitude	2500 meters (8200 feet)
WIRE SIZES	
Connections (All lugs are rated to 90°C)	Main lugs and busbar load lugs: Cu/Al-6 AWG-300 kcmil CSR rearer bottom wiring lugs: Cu/Al-2 AWG-300 kcmil Main lugs and busbar load lugs: Cu/Al-2 AWG-300 kcmil Generator lugs: Cu/Al-6 AWG-300 kcmil Neutral (large lugs): Cu/Al-6 AWG-300 kcmil Neutral (small lugs): Cu/Al-2 AWG-300 kcmil Large holes (10-32 UNF): 14 AWG-1/0 AWG Small holes (10-32 UNF): 14 AWG-6 AWG
COMPLIANCE	
Compliance (under progress)	UL 1741, UL 1741A, IEEE 1547-2018 (UL 1741-3B, 3rd Ed.), UL 1741 PCS CHD, UL 1898, UL 1898A, UL 1898B, UL 1898C, UL 1898D, UL 1898E, UL 1898F, UL 1898G, UL 1898H, UL 1898I, UL 1898J, UL 1898K, UL 1898L, UL 1898M, UL 1898N, UL 1898O, UL 1898P, UL 1898Q, UL 1898R, UL 1898S, UL 1898T, UL 1898U, UL 1898V, UL 1898W, UL 1898X, UL 1898Y, UL 1898Z, UL 1898AA, UL 1898AB, UL 1898AC, UL 1898AD, UL 1898AE, UL 1898AF, UL 1898AG, UL 1898AH, UL 1898AI, UL 1898AJ, UL 1898AK, UL 1898AL, UL 1898AM, UL 1898AN, UL 1898AO, UL 1898AP, UL 1898AQ, UL 1898AR, UL 1898AS, UL 1898AT, UL 1898AU, UL 1898AV, UL 1898AW, UL 1898AX, UL 1898AY, UL 1898AZ, UL 1898BA, UL 1898BB, UL 1898BC, UL 1898BD, UL 1898BE, UL 1898BF, UL 1898BG, UL 1898BH, UL 1898BI, UL 1898BJ, UL 1898BK, UL 1898BL, UL 1898BM, UL 1898BN, UL 1898BO, UL 1898BP, UL 1898BQ, UL 1898BR, UL 1898BS, UL 1898BT, UL 1898BU, UL 1898BV, UL 1898BW, UL 1898BX, UL 1898BY, UL 1898BZ, UL 1898CA, UL 1898CB, UL 1898CC, UL 1898CD, UL 1898CE, UL 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Warranty	Up to 10 years (EP200G-N4-02-RSD has a 5-year warranty)
COMPATIBILITY*	IQ Battery SP (IQ BATTERY-SP-IP-NA)
Battery	IQ8, IQ7, IQ6, and M-Series Microinverters*
Microinverters	IQ Combiner 5/5C (IQ-AMP-240-5C, X-IQ-AMP-240-5)
IQ Combiner	COMAIS-INT-02
Communications K1.2	

OT: See below for these standards used during the safety evaluation and included in the UL ETL listing.
(B) For more details, refer to IQ System Controller 3/3G Quick Install Guide.
(B) M-Series Microinverters can only be supported in states that have not yet adopted IEEE 1547-2018.
(B) ** - Indicates alternating current (AC) supply. IQ Series Microinverters will continue to support the same IQ Gateway.
(B) ** - Indicates alternating current (AC) supply.

IQSC-3-DH-00021-3-DH-US-2023-08-08

IQ System Controller 3/3G

MODEL NUMBER	DESCRIPTION
SC2000HTC240US01	IQ System Controller 3/3G integrates the grid-independent capabilities of PV load transfer installations. Integrates hold-down capability. Supports IQ Battery SP units up to 40 kWh (without PCS) and 80 kWh (with PCS). Does not support generator integration.
SC2000HTC240US01	IQ System Controller 3G streamlines the grid-independent capabilities of PV and storage installations. Integrates hold-down capability. Supports IQ Battery SP units up to 20 kWh (without PCS) and 40 kWh (with PCS). Supports generator integration.
WHAT'S IN THE BOX	
IQ System Controller 3/3G	Includes neutral-forming transformer (NFT) and microgrid interconnect device (MID)
System Shutdown Switch	Includes pre-wired red, black, orange, and purple 12 AWG wire (EP200G-N4-02-RSD)
Wall-mounting bracket	Screws provided in the accessories kit for mounting
4-pole circuit breaker	Pre-installed Quad Breaker (BRK-20M40A-4P-240V), 20 A, 10 kAIC, Eaton BOC220A4P
Accessories kit	IQ System Controller 3/3G literature kit, including labels, CTRL headers, screws, filler plates, and Quick Install Guide (QIG) (EP200G-LITKIT)
OPTIONAL ACCESSORIES AND REPLACEMENT PARTS	
CT-200-SPLIT	200 A split-core current transformers for metering (accuracy: ±2.5%)
CT-200-CLAMP	200 A clamp-type current transformers for metering (accuracy: ±2.5%)
Main or load circuit breakers (order separately, as needed)*	<ul style="list-style-type: none">BRK-100A-2P-240V; 2-pole, 100A, 25kAIC, CSR210N or CSR2100BRK-125A-2P-240V; 2-pole, 125A, 25kAIC, CSR212NBRK-150A-2P-240V; 2-pole, 150A, 25kAIC, CSR215NBRK-200A-2P-240V; 2-pole, 200A, 25kAIC, CSR220NBRK-200A-2P-240V; 2-pole, 200A, 25kAIC, CSR2200NBRK-30A-2P-240V; 2-pole, 30 A, 10 kAIC, BR20S-#B220BRK-30A-2P-240V; 2-pole, 30 A, 10 kAIC, BR20SBRK-40A-2P-240V; 2-pole, 40 A, 10 kAIC, BR240SBRK-40A-2P-240V; 2-pole, 40 A, 10 kAIC, BR260BRK-60A-2P-240V; 2-pole, 60 A, 10 kAIC, BR260
Distributed energy resource (DER) circuit breakers (order separately, as needed)*	IQ System Controller 3/3G installation handle kit (order separately)
EP200G-HQDL-RI	Control cable, 500 ft, spool (order separately)
CTRL-SC3-N4-01	Control cable, 500 ft, spool (order separately)
ALTERNATE DER CIRCUIT BREAKERS	
GE/ABB	THQL 21xx (20/40/60/80 A)
Siemens	Q2xx (20/40/60/80 A)
Siemens (quad breaker)	Q240QCT3 (20/40 A)
ELECTRICAL SPECIFICATIONS	
Nominal voltage/Range (L-L)	240 V~1/200%
Voltage measurement accuracy	±1% Nominal (L-L), L-N and L-N and L-L
Auxiliary (dry) contact for load control, excess PV control, and generator two-wire control	24 V, 1A
Nominal frequency/Range	60 Hz/55-63 Hz
Frequency measurement accuracy	±0.1 Hz
Maximum continuous current rating	180 A
Maximum input overcurrent protection device	200 A
Maximum output overcurrent protection device	200 A
Maximum overcurrent protection device rating for generator circuit	80 A (IQ System Controller 3G only - SC2000HTC240US01)
Maximum overcurrent protection device rating for storage circuit	2 x 80 A (IQ System Controller 3 - SC2000HTC240US01), 1 x 80 A (IQ System Controller 3G - SC2000HTC240US01)

(2) Factory installed quad breaker (Siemens or Eaton) NFT pre-wired for 40 A terminal of the quad breaker.
(3) Two units of CT-200-SPLIT or CT-200-CLAMP must be bought separately for generator integration.
(4) The IQ System Controller 3 is rated at 22 kAIC (2000/2500/2500/2500/2500/2500) without specified break.
(5) Integrated hold-down kit also supports GE/ABB and Siemens as mentioned under section alternate DER circuit breakers.
(6) ** - Indicates alternating current (AC) supply.
(*) Power Control System.

IQSC-3-DH-00021-3-DH-US-2023-08-08

DATASHEET

IQ System Controller 3/3G

The Enphase IQ System Controller 3/3G connects the home to grid power, the IQ Battery system, and solar PV. It provides microgrid interconnect device (MID) functionality by automatically detecting and seamlessly transferring the home energy system from grid power to backup power in the event of a grid failure. It consolidates interconnection equipment into a single enclosure to allow a grid-independent microgrid for residential applications by providing a consistent, pre-wired solution for residential applications.

Easy to install

- Connects to service entrance* or main load center
- Includes neutral-forming transformer
- Mounts on single stud with centered brackets
- Provides conduit entry from the bottom, left, or right
- Includes color-coded wires for ease of wiring the System Shutdown Switch
- Integrates hold-down functionality to eliminate the need for hold-down kits and special breakers

Flexible

- Can be used for Sunlight Backup, Home Essentials Backup, or Full Energy Independence
- IQ System Controller 3 integrates with IQ Battery SP
- IQ System Controller 3G integrates with select AC standby generators. See the [Generator Integration Tech Brief](#) for a list of generators
- Provides a seamless transition to backup

Safe and reliable

- System Shutdown Switch can be used to disconnect PV battery, and generator systems
- System Shutdown Switch acts as a rapid shutdown initiator for grid-forming IQ8 PV Microinverters for the safety of maintenance technicians/first responders
- 10-year limited warranty

IQ Series Microinverters

The high-powered smart grid-ready IQ Series Microinverters (M-Series, IQ6, IQ7, and IQ8 Series) dramatically simplify the installation process.



IQ Battery SP

Fully integrated AC battery system. Includes six field-replaceable IQ8-BAT microinverters



IQ Combiner 5/5C

Consolidates PV interconnection equipment into a single enclosure and streamlines IQ Series Microinverter installation by providing a consistent, pre-wired solution for residential applications



IQ Load Controller

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



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(1) IQ System Controller 3 is not suitable for use as service equipment in Canada.

IQSC-3-DH-00021-3-DH-US-2023-08-08

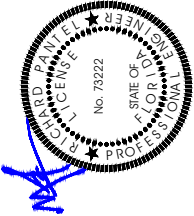
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BRILLIANT SOLAR
1433 HOOPER AVE, STE 212
TOMS RIVER, NJ 08753

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



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

PROJECT NAME & ADDRESS

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

DRAWN BY
ESR

SHEET NAME
BATTERY
DATASHEET

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PD006

IQ Battery 5P

BATTERY	
Total capacity	5.0 kWh
Usable capacity	5.0 kWh
DC round-trip efficiency	96%
Nominal DC voltage	76.8 V
Maximum DC voltage	86.4 V
Ambient operating temperature range (charging)	-20°C to 50°C (-4°F to 122°F) non-condensing
Ambient operating temperature range (discharging)	-20°C to 65°C (-4°F to 147°F) non-condensing
Optimum operating temperature range	0°C to 30°C (32°F to 86°F)
Chemistry	Lithium iron phosphate (LFP)
MECHANICAL DATA	
Dimensions (WxHxD)	860 mm x 580 mm x 185 mm (33.8 in x 22.7 in x 7.4 in)
Lifting weight	66.3 kg (146.1 lbs)
Total installed weight	78.9 kg (174 lbs)
Enclosure	Outdoor - NEMA 3R
IQBD-BAT Microinverter enclosure	NEMA type 6
Cooling	Natural convection
Altitude	Up to 2,500 meters (8,202 feet)
Mounting	Wall-mount or pedestal-mount (sold separately)
FEATURES AND COMPLIANCE	
Compatibility	Compatible with IQ and M-Series Microinverters, IQ System Controller 3.0G, IQ Combiner 3.0C, and IQ Gateway for grid-tied and backup operation
Communication	Wired control communication
Services	Backup, Self-Consumption, TOU, and NEM Integrity
Monitoring	Enphase Installer Platform and Enphase App monitoring options; API integration CA Rule 21 (UL 1741-SA), IEEE 1547-2018 (UL 1741-SB, 3rd Ed.) CAN/CSA C22.2 No. 1071-16 UL 9540 ^a , UL 9540A, UN 38.3, UL 1988, UL 1991, NEMA Type 3R, ACB6 ENEC 47 CPE, Part 15, Class B, FCC 15.003, IEC 61000-3-2 Inverter type: UL 62109-1, IEC 62109-2
Compliance	
LIMITED WARRANTY	
Limited warranty	>80% capacity, up to 15 years or 6,000 cycles ^b

^a Following local standards, choose a well-ventilated, non-habitable, indoor location (fills a 2-car garage) or in an outdoor location, which is out of direct sunlight and where the ambient temperature and humidity are within -4°F to 107°F (-20°C to 40°C) and 95% to 99% RH, non-condensing.
^b Maximum capacity (kW) decreases with age.

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IQB-SP-DSH-0000-4-0-EN-US-2023-11-07

IQ Battery 5P

MODEL NUMBER	
IQBATTERY-5P-1P-NA	The IQ Battery 5P system with integrated IQ Microinverters and battery management system (BMS) with battery controller
WHAT'S IN THE BOX	
IQ Battery 5P unit	IQ Battery 5P unit (B05-T02-US00-1-3)
ID cover and conduit cover	IQ Battery 5P cover with two conduit covers for the left and right sides of the unit
Bottom mounting bracket and top shield	Bottom mounting bracket for mounting the battery on the wall. One top shield is required for UL9540A
M5 seismic screws	Two M5 seismic screws for securing the battery unit on the bottom mounting bracket
M4 grounding screws	Two M4 grounding screws for securing the top shield on the bottom mounting bracket
M5 ID cover grounding screws	Two M5 ID cover grounding screws for the EM/EMC requirement
Cable ties	Six cable ties for securing field cables to the unit
Control (CTRL) connector	Spares CTRL connector without resistor for CTRL wiring
Control (CTRL) connector with resistor	Spares CTRL connector with resistor for CTRL wiring
Quick Install Guide (QIG)	QIG for IQ Battery unit installation instructions
OPTIONAL ACCESSORIES AND REPLACEMENT PARTS	
IQBD-BAT-RMA	IQBD-BAT Microinverter for field replacement
B05-T02-US00-1-3-RMA	IQ Battery 5P Battery unit for field replacement
B05-CX-0500-O	IQ Battery 5P cover for field replacement
B05-PH-0550-O	IQ Battery 5P pedestal mount
B05-CP-096-O	IQ Battery 5P conduit plates for field replacement. Includes one left-side and one right-side conduit plate
B05-WB-0543-O	IQ Battery 5P wall bracket for field replacement. Includes one bottom mounting bracket and one top shield
IQBATTERY-HMDL-5	IQ Battery 5P fitting handles. Includes one left-side and one right-side fitting handle
B05-ACFB-080-O	IQ Battery 5P AC filter board for field replacement
B05-BMSMA-0490-O	IQ Battery 5P BMS board for field replacement
B05-CANB-033-O	IQ Battery 5P control communication board for field replacement
B05-MICS-0524-Q, B05-NUCS-0524-O	IQ Battery 5P control switch is preinstalled on the wiring cover for field replacement
OUTPUT (AC)	
Rated (continuous) output power	3.84 kW
Peak output power	7.68 kW (3 seconds), 6.14 kW (10 seconds)
Nominal voltage/range	240/217-264 VAC
Nominal frequency/range	60/57-63 Hz
Rated output current (6240 VAC)	16 A
Peak output current (6240 VAC)	32 A (3 seconds), 25.6 A (10 seconds)
Power Start capability	Up to 48 A LRA ¹
Power factor (adjustable)	0.85 leading, 0.85 lagging
Maximum units per 20 A branch circuit	One unit (single-phase)
Maximum conductor size supported	3 AWG
Overcurrent protection device (OCPD) for 3 AWG cable	80 A
Interconnection	Single-phase
AC round-trip efficiency ²	90%

¹Supported in both grid-connected and backup/off-grid operation.

²AC to the battery to AC at 50% power rating.

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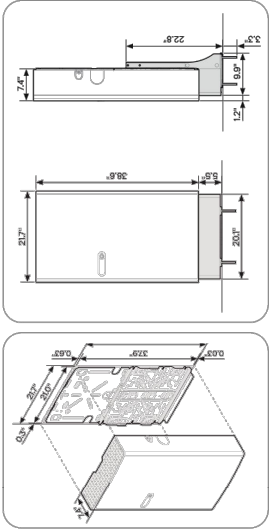
IQB-SP-DSH-0000-4-0-EN-US-2023-11-07



IQ Battery 5P

The IQ Battery 5P all-in-one AC-coupled system is powerful, reliable, simple, and safe. It has a total usable energy capacity of 5.0 kWh and includes six embedded grid-forming microinverters with a 3.84 kW continuous power rating. It provides backup capability, and installers can quickly design the right system size to meet the customer needs.

Dimensions in inches



Wall mounted

Floor mounted with pedestal (sold separately)



UL 9540A
Certified

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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

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110 SE Watula Avenue

EnvelopeId Stamping: Enabled

City Hall, Third Floor

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Ocala, FL 34471

aadolf@ocalafl.gov

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

William E. Sexton

wsexton@ocalafl.org

City Attorney

City of Ocala

Security Level: Email, Account Authentication
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Janice Mitchell

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CFO

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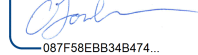
Chris Gowder

chris.gowder@fmpa.com

VP of IT/OT and System Ops

Security Level: Email, Account Authentication
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Certified Delivery Events	Status	Timestamp
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Envelope Sent	Hashed/Encrypted	8/13/2024 9:07:02 PM
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