

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: Ehoud Buton

Mailing Address: 1321 SE 3rd Street

City: Ocala State: FL Zip Code: 34471

Phone Number: 352-277-7757 Alternate Phone Number: _____

Email Address: ehoudb@gmail.com Fax Number: _____

Ocala Electric Utility Customer Account Number: 512791-219082

2. RGS Facility Information

Facility Location: 1321 SE 3rd Street Ocala, FL. 34471

Ocala Electric Utility Customer Account Number: 512791-219082

RGS Manufacturer: Hyundai Energy Solutions

Manufacturer's Address: _____

Reference or Model Number: HIS-S410YH(BK) (410W) MODULES

Serial Number: _____

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Electric Utility Director

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3. Facility Rating Information

Gross Power Rating: 8.02kWac ("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 PV

Anticipated In- Service Date: 3/1/25

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: Ehoud Buton
(Print Name)

Date:

2/5/2025


(Signature)

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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 5th day of February, 2025, 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 Ehoud Buton, 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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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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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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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
Title: CFO
Date: 3/25/2025

Florida Municipal Power Agency

By: DocuSigned by:
[Signature]
Title: Chief Sys Ops & Tech Officer
Date: 3/25/2025

Customer

By: Ehoud Buton
(Print Name)
[Signature]
(Signature)
Date: 2/5/2025

Customer's City of Ocala Electric Utility Account Number: 512791-219082

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

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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 1 – Standard Interconnection Agreement
Customer-Owned Renewable Generation System**

This **Agreement** is made and entered into this 5th day of February, 20 25, by and between Ehoud Buton, (hereinafter called "**Customer**"), located at 1321 SE 3rd Street in Ocala, Florida, and the City of Ocala doing business as Ocala Electric Utility (hereinafter called OEU), a body politic. Customer and OEU shall collectively be called the "**Parties**". The physical location/premise where the interconnection is taking place: 1321 SE 3rd Street Ocala, FL. 34471.

WITNESSETH

Whereas, a Tier 1 Renewable Generation System (RGS) is an electric generating system that uses one or 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 no more than ten (10) kilowatts (10 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 the City of Ocala; 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 identified 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 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; 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, the 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;

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

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Electric Utility Director

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1. The Customer shall be required to enter into a Tri-Party Net-Metering Purchase Power Agreement with FMPA and the City of Ocala Electric Utility (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's 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 1 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. Increase in GPR above the ten kilowatt (10 kW) limit would necessitate entering into a new agreement at either Tier 2 or Tier 3 which may impose additional requirements on the Customer. In no case does the Tier 1, Tier 2 or Tier 3 agreement cover increases in GPR above two megawatts (2MW).
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 not be required to pay any special fees due solely to the installation of the RGS.
6. The Customer shall fully comply with OEU's Design Standards following NEC standards as those documents may be amended or revised by OUS 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*.
 - 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.

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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 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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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 an OEU interactive inverter or interconnection system equipment that ceases to interconnect with the OEU system upon a loss of OEU's electric 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 that (i) utilizes the same OEU interactive inverter for both systems, or (ii) utilizes a separate OEU interactive inverter for each system, 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 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 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 system, such that back feed from the customer-owned renewable generation system to OEU's 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 Section 18, 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 hundred thousand dollars (\$100,000.00).

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 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.

(Continued on Sheet No. 21.5)

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

Effective: October 1, 2019

OCALA ELECTRIC UTILITY
OCALA, FLORIDA
(Continued from Sheet No. 21.4)

FIRST REVISED SHEET NO. 21.5
CANCELS ORIGINAL SHEET NO. 21.5

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 OEU 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.

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 system emergencies, forced outages, uncontrollable forces or compliance with prudent electric OEU 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 system due to the operation of the Customer's generation or protective equipment as determined by OEU.
- d. Adverse electrical affects (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.

(Continued to Sheet No. 21.6)

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

Effective: October 1, 2019

OCALA ELECTRIC UTILITY
OCALA, FLORIDA
(Continued from Sheet No. 21.5)

FIRST REVISED SHEET NO. 21.6
CANCELS ORIGINAL SHEET NO. 21.6

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.
- 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, agents, contractors (and any subcontractor or material supplier thereof) 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.

(Continued on Sheet No. 21.7)

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

Effective: October 1, 2019

OCALA ELECTRIC UTILITY
OCALA, FLORIDA
(Continued from Sheet No. 21.6)

FIRST REVISED SHEET NO. 21.7
CANCELS ORIGINAL SHEET NO. 21.7

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 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 Agreement 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.

(Continued on Sheet No. 21.8)

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

Effective: October 1, 2019

OCALA ELECTRIC UTILITY
OCALA, FLORIDA
(Continued from Sheet No. 21.7)

FIRST REVISED SHEET NO. 21.8
CANCELS ORIGINAL SHEET NO. 21.8

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 two and one-half percent (2.5%) of the aggregate customer peak demand on the OEU 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. 21.9)

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

Effective: October 1, 2019

CONTRACT# ELE/250511

OCALA ELECTRIC UTILITY
OCALA, FLORIDA
(Continued from Sheet No. 21.8)

FIRST REVISED SHEET NO. 21.9
CANCELS ORIGINAL SHEET NO. 21.9

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

City of Ocala Electric Utility:

Customer:

By:  _____
Signed by: Janice Mitchell
55198B43858A4E1...

By: Ehoud Buton _____
(Print Name)

Title: CFO _____

 _____
(Signature)

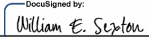
Date: 3/25/2025 _____

Date: 2/5/2025 _____

City of Ocala Electric Utility Account Number:

512791-219082

Approved as to form and legality:

 _____
DocuSigned by: William E. Sexton
55198B43858A4E1...
William E. Sexton, Esq.
City Attorney

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

Effective: October 1, 2019

CONTRACT# ELE/250511



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

1/13/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must be endorsed. If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Acentria Insurance - Gordon Reiss Insurance
1823 E Fort King Street
Suite 200
Ocala FL 34471

License#: L100460

BUTONEHO01

CONTACT NAME: Katrina Grantham

PHONE (A/C, No, Ext): 352-671-1833

FAX (A/C, No): 352-671-1834

E-MAIL ADDRESS: katrina.grantham@acentria.com

INSURER(S) AFFORDING COVERAGE

NAIC #

INSURER A : Nautilus Insurance Company

17370

INSURER B :

INSURER C :

INSURER D :

INSURER E :

INSURER F :

INSURED
Ehoud Buton
9691 SW 95TH Court, Unit A
Ocala FL 34481

COVERAGES

CERTIFICATE NUMBER: 1437616525

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS																				
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY			NN1703028	5/24/2024	5/24/2025	<table border="1"> <tr><td>EACH OCCURRENCE</td><td>\$ 1,000,000</td></tr> <tr><td>DAMAGE TO RENTED PREMISES (Ea occurrence)</td><td>\$ 100,000</td></tr> <tr><td>MED EXP (Any one person)</td><td>\$ 5,000</td></tr> <tr><td>PERSONAL & ADV INJURY</td><td>\$ 1,000,000</td></tr> <tr><td>GENERAL AGGREGATE</td><td>\$ 2,000,000</td></tr> <tr><td>PRODUCTS - COMP/OP AGG</td><td>\$</td></tr> <tr><td>COMBINED SINGLE LIMIT (Ea accident)</td><td>\$</td></tr> <tr><td>BODILY INJURY (Per person)</td><td>\$</td></tr> <tr><td>BODILY INJURY (Per accident)</td><td>\$</td></tr> <tr><td>PROPERTY DAMAGE (Per accident)</td><td>\$</td></tr> </table>	EACH OCCURRENCE	\$ 1,000,000	DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 100,000	MED EXP (Any one person)	\$ 5,000	PERSONAL & ADV INJURY	\$ 1,000,000	GENERAL AGGREGATE	\$ 2,000,000	PRODUCTS - COMP/OP AGG	\$	COMBINED SINGLE LIMIT (Ea accident)	\$	BODILY INJURY (Per person)	\$	BODILY INJURY (Per accident)	\$	PROPERTY DAMAGE (Per accident)	\$
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PERSONAL & ADV INJURY	\$ 1,000,000																										
GENERAL AGGREGATE	\$ 2,000,000																										
PRODUCTS - COMP/OP AGG	\$																										
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BODILY INJURY (Per accident)	\$																										
PROPERTY DAMAGE (Per accident)	\$																										
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	EXCESS LIAB						AGGREGATE \$																				
	DED RETENTION \$						\$																				
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY						<table border="1"> <tr><td>PER STATUTE</td><td>OTH-ER</td></tr> <tr><td>E.L. EACH ACCIDENT</td><td>\$</td></tr> <tr><td>E.L. DISEASE - EA EMPLOYEE</td><td>\$</td></tr> <tr><td>E.L. DISEASE - POLICY LIMIT</td><td>\$</td></tr> </table>	PER STATUTE	OTH-ER	E.L. EACH ACCIDENT	\$	E.L. DISEASE - EA EMPLOYEE	\$	E.L. DISEASE - POLICY LIMIT	\$												
PER STATUTE	OTH-ER																										
E.L. EACH ACCIDENT	\$																										
E.L. DISEASE - EA EMPLOYEE	\$																										
E.L. DISEASE - POLICY LIMIT	\$																										
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A																								

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
1321 SE 3rd Street
Ocala, FL 34471

CERTIFICATE HOLDER

CANCELLATION

City of Ocala
110 SE Watula Avenue
Ocala FL 34471

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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ACORD 25 (2014/01)

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SOLAR MODULE SPECIFICATIONS		
MANUFACTURER / MODEL #	HYUNDAI (HYUN) HSC-407W(HW)	
VMP	36.1V	(110W) MODULES
IMP	10.5A	
VOC	45.50V	
ISC	11.45A	
MODULE DIMENSION	75.75" x 40.77" x 1.38" (P.162)	
INVERTER SPECIFICATIONS		
MANUFACTURER / MODEL #	ENPHASE (DPLUG-72-48 MICRO) INVERTERS	
NET POWER RATING	2500W	
MAXIMUM INPUT VOLTAGE	150V	
MAXIMUM UNIT PER RACK	10	
MAXIMUM OUTPUT CURRENT	1.27A	
DC WEIGHTED EFFICIENCY	91%	
AMBIENT TEMPERATURE SPECS		
RECORD LOW TEMP	-45°	
AMBIENT TEMP (HIGH TEMP %)	50°	
CONDUIT MINIMUM HEIGHT FROM ROOF	0.57'	
CONDUIT TEMPERATURE RATING	90°	
SULFAS MODULE TEMPERATURE COEFFICIENT OF Voc	-2.68%/K	

- 1.) ALL EQUIPMENT SHALL BE LISTED BY UL OR OTHER NRTL, AND LOCATED AS CLOSE AS POSSIBLE TO THE LOAD.
- 2.) ALL CONDUCTORS SHALL BE COPPER RATED FOR 600 V AND 90°C WET ENVIRONMENT.
- 3.) ALL CONDUCTORS MOUNTED ON ROOFTOPS SHALL BE ROUTED DIRECTLY TO, AND LOCATED AS CLOSE AS POSSIBLE TO THE NEAREST PERMITTED "HIP" OR VALLEY.
- 4.) WORKING CLEARANCES AROUND ALL NEW AND EXISTING ELECTRICAL EQUIPMENT SHALL COMPLY WITH NEC 110.26.
- 5.) DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF SYSTEM. CONTRACTOR SHALL FURNISH ALL NECESSARY OUTLETS, SUPPORTS, FITTINGS, AND CONDUITS.
- 6.) WHERE SIZES OF JUNCTION BOXES, RACEWAYS, AND CONDUITS ARE NOT SPECIFIED, THE CONTRACTOR SHALL SIZE THEM ACCORDINGLY.
- 7.) ALL WIRE TERMINATIONS SHALL BE APPROPRIATELY LABELED AND ACCESSIBLE.
- 8.) INSTALL, MODULE AND RACKING GROUNDING HARDWARE PER MANUFACTURER'S INSTRUCTION.

AC CONDUCTOR AMPACITY CALCULATIONS: ARRAY TO JUNCTION BOX	
TEMP. CORRECTION FACTOR (C1)	30
TEMP. CORRECTION FACTOR (C2)	1.00
# OF CURRENT CARRYING CONDUCTORS	N/A
# OF C.C. CONDUCTORS CORRECTION FACTOR (NEC 310.15(C)(1))	1.00
TEMP. CORRECTION FACTOR (C3)	1.00
CIRCUIT CONDUCTOR AMPACITY	12
REQUIRED CIRCUIT CONDUCTOR AMPACITY (PER NEC 90.4(A)(1) & 90.5)	300
1.05 MAX AC OUTPUT * MAX # OF IN/OUT VENTERS/CIRCUIT	18.15A
DERATED CIRCUIT CONDUCTOR AMPACITY	30.00A
Result should be greater than (18.15A)	

AC CONDUCTOR AMPACITY CALCULATIONS: AC CONDUCTOR FROM JUNCTION BOX TO IQ COMBINER BOX	
EXPECTED VOLT. TEMP. IN Combiner	30
TEMP. CORRECTION FACTOR (C1)	1.00
# OF CURRENT CARRYING CONDUCTORS	4
TEMP. CORRECTION FACTOR (C2)	1.00
TEMP. CORRECTION FACTOR (C3)	1.00
CIRCUIT CONDUCTOR SIZE	10 AWG
CIRCUIT CONDUCTOR AMPACITY	40A
REQUIRED CIRCUIT CONDUCTOR AMPACITY (PER NEC 90.4(A)(1) & 90.5)	40A
1.05 MAX AC OUTPUT * MAX # OF IN/OUT VENTERS/CIRCUIT	18.15A
DERATED CIRCUIT CONDUCTOR AMPACITY	32.00A
Result should be greater than (18.15A)	

AC CONDUCTOR AMPACITY CALCULATIONS: FROM IQ COMBINER BOX TO ACD	
SPECIFIED WIRE TEMP (in Celsius)	30
TEMP CORRECT FROM TABLE (30°C/86°F)	1.00
A.P. CURRENT CARRYING CAPACITY	100
A.P. CIRC. CONDUCTORS CORRECTION PER NEC 310.15(C)(1)	1.00
A.P. CONDUCTOR SIZE	8 AWG
REQUIRED CONDUCTOR SIZE	8 AWG
REQUIRED CONDUCTOR AMPACITY	55.00A
AC MAX AC OUTPUT * TOTAL # OF MICROINVERTERS	34.75A
REQUIRED CIRCUIT CONDUCTOR AMPACITY	55.00A
Result should be greater than (34.75A)	
AC CONDUCTOR AMPACITY CALCULATIONS: FROM ACD TO POI	
SPECIFIED WIRE TEMP (in Celsius)	30
TEMP CORRECT FROM TABLE (30°C/86°F)	1.00
A.P. CURRENT CARRYING CAPACITY	100
A.P. CIRC. CONDUCTORS CORRECTION PER NEC 310.15(C)(1)	1.00
A.P. CONDUCTOR SIZE	8 AWG
REQUIRED CONDUCTOR SIZE	8 AWG
REQUIRED CONDUCTOR AMPACITY	65A
AC MAX AC OUTPUT * TOTAL # OF MICROINVERTERS	34.75A
REQUIRED CIRCUIT CONDUCTOR AMPACITY	75.00A
Result should be greater than (34.75A)	

2 | WIRING CALCULATIONS

SCALE: NTS

 **FLORIDA CLEAN ENERGY
INCORPORATED**
442 W KENNEDY BLVD SUITE 310
TAMPA, FL 33606

REVISIONS		
DESCRIPTION	DATE	REV
DATE: 12/27/2024		
PROJECT NAME		

EHOU DBUTON 1321

SHEET NAME
ELECTRICAL
LINE DIAGRAM &
WIRING CALCULATIONS

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
E-02

Signature with Seal

BILL OF MATERIALS		
QTY	EQUIPMENT	DESCRIPTION
23	SOLAR PV MODULE	HYUNDAI SOLAR: HSS-5410(HYBK) (410W) MODULES
23	INVERTER	ENPHASE IQBPU5-75250 (240V) MICRO-INVERTERS
1	JUNCTION BOX	JUNCTION BOX 600V, NEMA 3R UL LISTED
1	IQ COMBINER BOX	ENPHASE IQ COMBINER BOX (X-IQ-AM-1240-5/5C)
1	15A/2P BREAKER	15A/2P BREAKER
2	20A/2P BREAKER	20A/2P BREAKER
1	AC DISCONNECT	60A RATED FUSED AC DISCONNECT WITH 40A FUSES
20	RAIL	IRONBIDGE XR10 RAIL, 168"
14	SPLICE	SPLICE KIT
16	GROUNDING LUG	GROUNDING LUG
92	ATTACHMENT	IRONBIDGE QUICKMOUNT HALO ULTRA GRIP
62	WEO CLAMPS	WEO CLAMPS (HUG)
2	WEO CLAMPS	WEO CLAMPS



(E) FRONT YARD

**BRANCH-1
(12 MODULES)**

(N) JUNCTION BOX
(N) CONDUIT

BRANCH-2
(11 MODULES)

(N) 23-ENPHASE IQ8PLUS-72-2-US
(240V) MICRO-INVERTERS

(E) BACK YARD

(N) IQ COMBINER BOX
(N) AC DISCONNECT
(N) IAP BOX
(E) UTILITY METER
(E) MAIN SERVICE PANEL

SE 3RD ST.

1	ELECTRICAL SITE PLAN
E-01	SCALE: 1/8" = 1'-0"

ELECTRICAL CERTIFICATION STATEMENT:

SUBJECT PV SYSTEM HAS BEEN DESIGNED TO MEET THE REQUIREMENTS OF THE NEC 2002, AND/OR THOSE SET FORTH BY THE FLORIDA SOLAR ENERGY CENTER CERTIFICATION, INCLUDING MAXIMUM NUMBER OF MODULE STRINGS, MAXIMUM NUMBER OF MODULES PER STRING, MAXIMUM OUTPUT, MODULE MANUFACTURER AND MODEL NUMBER, INVERTER MANUFACTURER AND MODEL NUMBER, AS APPLICABLE. HB1021, AMENDED F.S. 377.05 IN 2017, REMOVED THE REQUIREMENT FOR DESIGNERS TO HAVE THEIR SYSTEM DESIGNS CERTIFIED BY FSEC. THE VERBAGE "... UNLESS OTHERWISE STIPULATED BE AN ENGINEER LICENSED PURSUANT TO CHAPTER 471 USING THE STANDARDS CONTAINED IN THE MOST RECENT VERSION OF THE FLORIDA BUILDING CODE," ALLOWS LICENSED ENGINEERS TO DESIGN PV SYSTEMS ON THEIR OWN AS THEY DO IN ALL OTHER TRADES.

DC SYSTEM SIZE: 9.43 kW DC STC
AC SYSTEM SIZE: 6.67 kW AC
(23) HYUNDAI SOLAR: HIS-S410Y(HBK) (410W) MODULES

(01) BRANCH OF 11 MODULES &
(01) BRANCH OF 12 MODULES

LEGEND

- TAP BOX
- MAIN SERVICE PANEL
- UTILITY METER
- IQ COMBINER BOX
- JUNCTION BOX
- AC DISCONNECT
- ROOF OBSTRUCTION
- CONDUIT


EHOUDBUTON 1321

SHEET NAME
ELECTRICAL
SITE PLAN & BOM

SHEET SIZE
ANSI B
11" X 17"

HEET NUMBER
E-01

Signature with Seal



**FLORIDA CLEAN ENERGY
INCORPORATED**
4421 W KENNEDY BLVD SUITE 310
TAMPA, FL 33606

REVISIONS

DESCRIPTION	DATE	REV

PROJECT NAME

1321 SOUTHEAST 3RD STREET,
OCALA, FL 34471

DATE: 12/27/2024

EHOD BUTON 1321

1321 SOUTHEAST 3RD STREET,
OCALA, FL 34471

SHEET NAME

MICROINVERTER
DATA SHEET

SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

DS-02

Signature with Seal

IQ8 Series Microinverters

INPUT DATA (DC)		IQ8H-15-72-2-US	IQ8H-17-72-2-US	IQ8H-20-72-2-US	IQ8H-24-72-2-US	IQ8H-28-72-2-US	IQ8H-30-72-2-US
Commonly used module pairing ^a	W	235 - 350	235 - 440	250 - 400	295 - 500	320 - 540+	295 - 500+
Module compatibility		60-cell/120 half-cell	60-cell/120 half-cell, 66-cell/132 half-cell and 72-cell/144 half-cell				
MPPPT voltage range	V	27 - 37	23 - 45	33 - 45	36 - 45	38 - 45	38 - 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 ^b [module loss]	A			15			
Overvoltage class DC port				II			
DC port backfeed current	mA			0			
PV array configuration		1x Ungrounded array, No split and DC side protection required, AC side protection required max 20A per branch circuit					
OUTPUT DATA (AC)		IQ8H-15-72-2-US	IQ8H-17-72-2-US	IQ8H-20-72-2-US	IQ8H-24-72-2-US	IQ8H-28-72-2-US	IQ8H-30-72-2-US
Peak output power	VA	245	300	330	366	384	366
Max continuous output power	VA	240	290	325	349	360	360
Nominal (L-L) voltage/range ^d	V		240 / 211 - 264			208 / 183 - 250	
Max continuous output current	A	1.0	1.21	1.35	1.45	1.58	1.73
Nominal frequency	Hz			60			
Extended frequency range	Hz			50 - 68			
AC short circuit fault current over 3 cycles	A rms		2				4.4
Max units per 20 A (L-L) branch circuit ^e		16	13	11	11	10	9
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	97.6	97.6	97.6	97.4
CEC weighted efficiency	%	97	97	97	97.5	97	97
Light-time power consumption	mW			60			
ENVIRONMENTAL DATA		-40°C to +60°C (-40°F to +140°F)					
Ambient temperature range		4% to 100% (condensing)					
Relative humidity range		MC4					
DC Connector type		212 mm (8.3") x 175 mm (6.9") x 302 mm (12")					
Dimensions (HxWxD)		108 kg (238 lbs)					
Weight		Natural convection - no fans					
Cooling		Yes					
Approved for vent locations		P03					
Pollution degree		Class II double-insulated, corrosion resistant polymers enclosure					
Enclosure		NEMA Type 6 / outdoor					
Environ. category / UV exposure rating							
COMPLIANCE		CA Rule 21 (UL 1741-SA), UL 62709-1, UL 1741/IEEE1547-FCO Part 15 Class B, IECES-0003 Class B, CAN/CSA-C22.2 NO. 603.01					
Certifications		This product is UL Listed as PV Rapid Shut Down Equipment and conforms with NEC 2014, NEC 2017, and NEC 2020 section 680.12 and C22.2-2018 Rule 64-216 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according to manufacturer's instructions.					

(1) The IQ8H-20H variant will be operating in grid-tied mode only at 208V AC. (2) No enforced DC/AC ratio. See the companion literature at <http://enphase.com/module-compatibility> (3) Maximum continuous input power is 1440W (4) 100% duty cycle (5) 100% duty cycle (6) 100% duty cycle (7) 100% duty cycle (8) 100% duty cycle (9) 100% duty cycle (10) 100% duty cycle (11) 100% duty cycle (12) 100% duty cycle (13) 100% duty cycle (14) 100% duty cycle (15) 100% duty cycle (16) 100% duty cycle (17) 100% duty cycle (18) 100% duty cycle (19) 100% duty cycle (20) 100% duty cycle (21) 100% duty cycle (22) 100% duty cycle (23) 100% duty cycle (24) 100% duty cycle (25) 100% duty cycle (26) 100% duty cycle (27) 100% duty cycle (28) 100% duty cycle (29) 100% duty cycle (30) 100% duty cycle (31) 100% duty cycle (32) 100% duty cycle (33) 100% duty cycle (34) 100% duty cycle (35) 100% duty cycle (36) 100% duty cycle (37) 100% duty cycle (38) 100% duty cycle (39) 100% duty cycle (40) 100% duty cycle (41) 100% duty cycle (42) 100% duty cycle (43) 100% duty cycle (44) 100% duty cycle (45) 100% duty cycle (46) 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IQ Combiner 5/5C

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
Fully integrated AC battery system. Includes six field-replaceable IQDB-BAT Microinverters (IQ6, IQ2 and IQ8 Series). The high-power, grid-ready IQ Series Microinverters automatically detect grid failures and seamlessly transitioning the home energy system from grid power to backup power.



IQ System Controller 3/3G
Provides secure, bidirectional communication between the IQ Series Microinverters and the IQ Gateway, 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 battery usage and prolong battery life.



IQ Battery SP
Fully integrated AC battery system. Includes six field-replaceable IQDB-BAT Microinverters.




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ICC-5-SC-DSH-00007-2.0-E4-US-2023-09-27

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 (ANSI C12.20 ±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-MI-06-SP-05)*. Includes a silver solar shield to deflect heat.
WHAT'S IN THE BOX	
IQ Gateway is the platform for total energy management for comprehensive, remote maintenance and management of the distributed IQ System.	
125A busbar with support for 1 x IQ Gateway breaker and 4 x 20A breaker for installing IQ Series Microinverters and IQ Battery SP.	
Busbar	
IQ Gateway breaker	
Production CT	
Consumption CT	
IQ Battery CT	
CTLR 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-SOLARSIELD-ES	
XA-EHV2-PCBA-5	
X-IQ-MA-HD-125A	
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, material-grade cell modem for systems up to 10 microinverters. (Available in the US, Canada, Mexico, Puerto Rico, and the US Virgin Islands, where there is adequate cellular service in the installation area.)



FLORIDA CLEAN ENERGY INCORPORATED
442 W KENNEDY BLVD SUITE 310
TAMPA, FL 33606

REVISIONS

DESCRIPTION	DATE	REV

PROJECT NAME

DATE: 12/27/2024

1321 SOUTHEAST 3RD STREET,
OCALA, FL 34471

EHOUD BUTON 1321

SHEET NAME

COMBINER

DATA SHEET-1

SHEET SIZE

ANSI B

11" X 17"

SHEET NUMBER

DS-03

Signature with Seal

ICC-5-SC-DSH-00007-2.0-E4-US-2023-09-27

MECHANICAL DATA	
Dimensions (WHKO)	37.5 mm x 49.5 mm x 18.8 mm (1.475" x 1.95" x 0.63"). 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 overstructure
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 conductors100 A breaker branch input: 4 to 1/0 AWG copper conductorsNeutral and ground: 14 to 1/0 copper conductorsAlways follow local code requirements for conductor sizing
Communication (in-premise connectivity)	Built-in CTDL 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-AT-05 (included with IQ Combiner 50)
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 60950-1/IEC60950-1, IEC60950-2, IEC60950-3, IEC60950-4, IEC60950-5, IEC60950-6, IEC60950-7, IEC60950-8, IEC60950-9, IEC60950-10, IEC60950-11, IEC60950-12, IEC60950-13, IEC60950-14, IEC60950-15, IEC60950-16, IEC60950-17, IEC60950-18, IEC60950-19, IEC60950-20, IEC60950-21, IEC60950-22, IEC60950-23, IEC60950-24, IEC60950-25, IEC60950-26, IEC60950-27, IEC60950-28, IEC60950-29, IEC60950-30, IEC60950-31, IEC60950-32, IEC60950-33, IEC60950-34, IEC60950-35, IEC60950-36, IEC60950-37, IEC60950-38, IEC60950-39, IEC60950-40, IEC60950-41, IEC60950-42, IEC60950-43, IEC60950-44, IEC60950-45, IEC60950-46, IEC60950-47, IEC60950-48, IEC60950-49, IEC60950-50, IEC60950-51, IEC60950-52, IEC60950-53, IEC60950-54, IEC60950-55, IEC60950-56, IEC60950-57, IEC60950-58, IEC60950-59, IEC60950-60, IEC60950-61, IEC60950-62, IEC60950-63, IEC60950-64, IEC60950-65, IEC60950-66, IEC60950-67, IEC60950-68, IEC60950-69, IEC60950-70, IEC60950-71, IEC60950-72, IEC60950-73, IEC60950-74, IEC60950-75, IEC60950-76, 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HYUNDAI SOLAR MODULE

Dual Black Max

HIS-S385YH(BK) HIS-S390VH(BK)
HIS-S400YH(BK) HIS-S405VH(BK)

Bifacial Cells
132

More Power Generation
in Low Light

UL T-300V
Fire Resistant Design
(Black Module w/ T-Back Sheet)

Half-Cut &
Multi-Wire Technology

Anti-LID / PID

Reliable Warranty

Maximized Power Generation

Increased total power output through capturing light from both the front and back of bifacial solar modules. Back side power gain up to 25% of the front output depending on PV system design.

Mechanical Strength

Tempered glass and reinforced frame design withstand rigorous weather conditions such as heavy snow(5,400Pa) and strong wind(4,000Pa).

About Hyundai Energy Solutions

Established in 1972, Hyundai Heavy Industries Group is one of the most trusted names in the heavy industries sector and is a Fortune 500 company. As a global leader and innovator, Hyundai Heavy Industries is committed to building a future growth engine by developing and investing heavily in the field of renewable energy.

As a core energy business entity of HHI, Hyundai Energy Solutions has strong pride in providing high-quality PV products to more than 3,000 customers worldwide.

Hyundai's Warranty Provisions

- 25-Year Product Warranty**
 - Materials and workmanship
- 25-Year Performance Warranty**
 - Initial year - 36.0% efficiency after second year - 35.0%
 - With 0.54%/a annual degradation, 85.0% is guaranteed up to 25 years

Certification

Printed Date : 05/2022(Final)

Electrical Characteristics

	Mono-Crystalline Type(HIS-S - Y)(BK)					
	S385	S390	S395	S400	S405	
Nominal Output (P _{mppt})	W	385	390	395	400	
Open Circuit Voltage (V _{oc})	V	44.5	44.8	45.0	45.3	
Short Circuit Current (I _{sc})	A	11.04	11.11	11.18	11.25	
Voltage at P _{max} (V _{mppt})	V	37.1	37.3	37.5	37.9	
Current at P _{max} (I _{mppt})	A	10.40	10.47	10.54	10.61	
Module Efficiency	%	19.3	19.5	19.8	20.0	
Cell Type	-	Mono crystalline, Shubser				
Maximum System Voltage	V	1,500				
Temperature Coefficient of P _{max}	%/K	-0.347				
Temperature Coefficient of V _{oc}	%/K	-0.268				
Temperature coefficient of Isc	%/K	+0.0322				

*At STC at STC (Measurement tolerance P_{max} ±2%, Voc ±1%, Isc ±1%). Above data may be changed without prior notice.

Mechanical Characteristics

Dimensions	1,038 mm (W) x 1,924 mm (L) x 35 mm(H)				
Weight	Approx. 21.1 kg				
Solar Cells	132 half cut bifacial cells (2 parallel x 66 half cells in series)				
Output Cables	Cable : 1,200mm / 4mm ² Connector : MC4 genuine connector				
Junction Box	IP68, waterproof, IEC certified (UL listed)				
Bypass Diodes	3 bypass diodes to prevent power decrease by partial shade				
Construction	Front : 3.2mm, High Transmission, AR Coated Tempered Glass Encapsulant : EVA Back Sheet : Black Meshed Transparent Backsheet				
Frame	Anodized aluminum alloy type 6063				

Installation Safety Guide

- Only qualified personnel should install or repair the module.
- Be aware of dangerous high DC voltage.
- Do not damage or scratch the rear surface of the module.
- Do not handle or install modules when they are wet.

Nominal Operating Cell Temperature 45.5°C ± 2°

Operating Temperature -40°C ~ +85°C

System Voltage DC 1,500V

Maximum Reverse Current 20A

Maximum Front Load Front 5,400Pa (11.3psi)
Rear 4,000 Pa (9.0psi)

I-V Curves

The graph shows I-V curves for temperatures ranging from -40°C to 85°C. The maximum power point shifts towards lower voltages and higher currents as temperature increases.

Module Diagram

Front Side View: Dimensions include 1,924mm length, 1,038mm width, and 35mm height.

Rear Side View: Shows the backsheet, junction box, and mounting holes with dimensions like 1,924mm, 1,038mm, and 35mm.

DETAIL A

DETAIL B

DETAIL C

DETAIL D

SHEET NAME

MODULE DATA SHEET

SHEET SIZE

ANSI B 11" X 17"

PROJECT NAME

EHOUD BUTON 1321

1321 SOUTHEAST 3RD STREET,
OCALA, FL 34471

SHEET NUMBER

DS-01

REVISIONS

DESCRIPTION	DATE	REV

Signature with Seal

Certificate Of Completion

Envelope Id: 0D5A1D62-D669-4863-9949-062C9CF6989F

Status: Completed

Subject: SIGNATURE: Net-Metering Agreement - Ehoud Buton - 1321 SE 3rd St. (ELE/250511)

Source Envelope:

Document Pages: 27

Signatures: 5

Envelope Originator:

Certificate Pages: 5

Initials: 0

April Adolf

AutoNav: Enabled

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Ocala, FL 34471

aadolf@ocalafl.gov

IP Address: 216.255.240.104

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Location: Docusign

Signer Events

William E. Sexton

wsexton@ocalafl.org

City Attorney

City of Ocala

Security Level: Email, Account Authentication (None)

Signature

DocuSigned by:

William E. Sexton

B07DCFC4E88E429...

Timestamp

Sent: 3/21/2025 7:25:06 PM

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Not Offered via Docusign

Janice Mitchell

jmitchell@Ocalafl.org

CFO

City of Ocala

Security Level: Email, Account Authentication (None)

Signed by:

Janice Mitchell

55198B43858A4E1...

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Signature Adoption: Pre-selected Style

Using IP Address: 38.34.227.194

Electronic Record and Signature Disclosure:

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ID: 4af82bc9-25fa-4e21-b66e-89df3a028276

Chris Gowder

chris.gowder@fmpa.com

Chief Sys Ops & Tech Officer

Security Level: Email, Account Authentication (None)

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Chris Gowder

087F58EBB34B474...

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ID: bd862d5f-1ccd-4e9a-93eb-e7f7225c8a5e

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	3/21/2025 7:25:06 PM
Certified Delivered	Security Checked	3/25/2025 2:49:20 PM
Signing Complete	Security Checked	3/25/2025 2:49:31 PM
Completed	Security Checked	3/25/2025 2:49:31 PM
Payment Events	Status	Timestamps
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