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: Thomas Wilson

Mailing Address: 3941 NE 33rd Avenue

City: Ocala State: FL Zip Code: 34479

Phone Number: 347-715-0810 Alternate Phone Number: 917-601-9828

Email Address: tmwilson@gmail.com Fax Number: melbawilson514@gmail.com

Ocala Electric Utility Customer Account Number: 570517-255253

2. RGS Facility Information

Facility Location: 3941 NE 33rd Avenue Ocala, FL. 34479

Ocala Electric Utility Customer Account Number: 570517-255253

RGS Manufacturer: Longi Green Energy Technology

Manufacturer's Address: Suite 17.02 570 George Street, Sydney NSW 2000

Reference or Model Number: Longi LR5-54HPB-400M

Serial Number: Longi LR5-54HPB-400M

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3. Facility Rating Information

Gross Power Rating: 5.44kWac ("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: 10/1/24

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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(Continued from Sheet No. 19.1)

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

B. Documentation that the customer-owned renewable generation has been inspected and approved by local code officials prior to its operation in parallel with the Ocala Electric Utility system to ensure compliance with applicable local codes. OEU will also require proof of commission testing by a qualified 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: Thomas R. Wilson Date: 10/14/24
(Print Name)

Th R Wilson
(Signature)

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

Effective: October 1, 2019

Tri-Party Net-Metering Power Purchase Agreement

This Tri-Party Net-Metering Power Purchase Agreement (this "Agreement") is entered into this 18 day of September, 20 24, 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 Thomas Wilson, a retail electric customer of OEU (hereinafter "Customer").

Section 1. Recitals

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

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

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

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

Section 2. Interconnection

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

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

(Continued on Sheet No. 20.1)

Section 3. Metering

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

Section 4. Purchase of Excess Customer-Owned Renewable Generation

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

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

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

(Continued on Sheet No. 20.2)

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

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

Section 5. Renewable Energy Credits

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

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

Section 6. Term and Termination

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

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

(Continued on Sheet No. 20.3)

Section 7. Miscellaneous Provisions

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

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

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

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

(Continued on Sheet No. 20.4)

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

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

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

(Continued on Sheet No. 20.5)

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

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

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

City of Ocala Electric Utility

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

Title: CFO

Date: 3/25/2025

Florida Municipal Power Agency

By: DocuSigned by: 087F58EBB34B474...

Title: Chief Sys Ops & Tech Officer

Date: 3/25/2025

Customer

By: Thomas R. Wilson Date: 10/14/24

(Print Name)

(Signature)

Customer's City of Ocala Electric Utility Account Number: 5 70517-25 5253

Approved as to form and legality:

DocuSigned by: William E. Sexton B07DCFC4E86E429...

William E. Sexton, Esq.
City Attorney

(Continued on Sheet No. 20.6)

Tri-Party Net-Metering Power Purchase Agreement
Schedule A

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

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

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

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

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

II. Payment for Unused Excess Energy Credits

a) Monthly excess energy credits shall accumulate and be used to offset the Customer's following month energy consumption bill for a period of not more than twelve (12) months.

b) At the end of each calendar year, OEU shall pay the Customer for any unused excess energy credits in accordance with the OEU Electric Net-Metering Service Rate Schedule.

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

This **Agreement** is made and entered into this 18 day of September, 20 24, by and between Thomas Wilson, (hereinafter called "**Customer**"), located at 3941 NE 33rd Avenue 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: 3941 NE 33rd Avenue Ocala, FL. 34479.

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' 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' 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:

(Continued on Sheet No. 21.1)

(Continued from Sheet No. 21.0)

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.

(Continued to Sheet No. 21.2)

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.

(Continued on Sheet No. 21.3)

12. The Customer's RGS must have an appropriately sized grid-tie inverter system that includes applicable protective systems. Customer certifies that the RGS equipment includes 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' 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.

(Continued on Sheet No. 21.4)

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

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' 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)

(Continued from Sheet No. 21.5)

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)

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)

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)

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:

By: Signed by: Janice Mitchell 5519BB43B58A4E1...

Title: CFO

Date: 3/25/2025

Customer:

By: Thomas R. Wilson
(Print Name)
T R Wilson
(Signature)

Date: 10/14/24

City of Ocala Electric Utility Account Number:

570517-255253

Approved as to form and legality:

DocuSigned by: William E. Sexton B97DD5C4E88E428...

William E. Sexton, Esq.
City Attorney

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

Effective: October 1, 2019

CONTRACT# ELE/250510

AMERICAN STRATEGIC INSURANCE CORP

1 ASI Way
St. Petersburg, FL 33702

PROGRESSIVE HOME

Homeowners Declaration Page

Total Policy Premium:	**$952**
Policy Number:	**FLA514853**

Named Insured:
THOMAS WILSON AND MARIA MELBA WILSON
3941 NE 33RD AVE
OCALA, FL 34479-3141

Agent:
Lennar Insurance Agency
PO Box 23039
St Petersburg, FL 33742

Agent Code: 482627
For Policy Service, Call: (866)487-2643

Effective Date of This Transaction: 5/25/2024

Activity of This Transaction: Change Mortgagee

Policy Period: From: 05/25/2024 To: 05/25/2025
(At 12:01 AM Standard Time at the Residence Premises)

Residence Premises:
3941 NE 33RD AVE
OCALA, FL 34479-3141

Plan Type: NH3

Coverage at the Residence Premises is provided only where a limit of liability is shown or a premium is stated.

Coverages and Limits of Liability		Limit	Premium
SECTION I:	A. Dwelling Coverage	$278,000	6703.72
	B. Other Structures	$27,800	39.73
	C. Personal Property	$139,000	Included
	D. Loss of Use	$27,800	Included
SECTION II:	E. Personal Liability - Each Occurrence	$300,000	15.00
	F. Medical Payments to Others - Each Person	$5,000	10.00

OTHER COVERAGES AND ENDORSEMENTS:
(Printed on the following page)

Special Messages:

Deductibles:

HURRICANE:	2% - $5560
ALL OTHER COVERED PERILS:	$1000

Mortgagee:

1st Mortgagee
PENNYMAC LOAN SERVICES, LLC ITS
SUCCESSORS AND/ OR ASSIGNS
PO BOX 6618
SPRINGFIELD, OH 45501-6618
Loan #0020837983 Escrow: Yes

2nd Mortgagee

3rd Mortgagee

President

Agent

PV PROJECT- 6.4kWdc

2 AERIAL MAP - PROJECT LOCATION
NTS

SCOPE OF WORK:
THESE PLANS ARE FOR THE INSTALLATION OF A ROOF MOUNTED PHOTOVOLTAIC (PV) SYSTEM. THE PV SYSTEM WILL BE INTERCONNECTED WITH THE UTILITY GRID THROUGH EXISTING ELECTRICAL EQUIPMENT AND WILL OPERATE IN PARALLEL VIA CONNECTION WITH NET ENERGY METER.

GOVERNING BUILDING CODES:
1. 2023 FLORIDA BUILDING CODE, 8TH EDITION
2. 2023 FLORIDA RESIDENTIAL CODE, 8TH EDITION
3. 2020 NATIONAL ELECTRICAL CODE, NEC
4. 2023 FLORIDA FIRE PREVENTION CODE 8TH EDITION.
5. UL STANDARDS 5.1. RACKING - UL 2703 5.2. PV MODULE - UL 1703 5.3. INVERTER - UL 1741

DESIGN SPECIFICATIONS
AHJ - MARION COUNTY

PV SYSTEM SPECIFICATIONS
1. PV MODULE: 16 x LONGI LR5-54HPB-400M
2. INVERTER: IQ8PLUS-72-2-US
3. RACKING: K2 EVEREST RAIL W/ SPLICE FOOT
4. ROOF TYPE: SHINGLE

PV INSTALLATION OVERVIEW ELECTRICAL
a. MAX INV OUTPUT CURRENT: 1.21A Ea.
b. PV AC DEDICATED OCP DEVICE RATING: 16 * 1.21A * 125% = 24.2A, 25A OCP
c. UTILITY AC DISCONNECT REQ'D: YES

Sheet List Table

Sheet Number	Sheet Title
E-01	COVER/ PV SITE PLAN
E-02	PV ATTACH PLAN
E-03	LINE DIAGRAM
E-04	ELEVATION/PLACARDS
E-05	MODULE SPECS
E-06	INVERTER SPECS
E-07	SPECIFICATIONS SHEET
E-08	SPECIFICATIONS SHEET
E-09	SPECIFICATIONS SHEET
E-10	SPECIFICATIONS SHEET
E-11	SPECIFICATIONS SHEET
E-12	SPECIFICATIONS SHEET
E-13	SPECIFICATIONS SHEET
E-14	SPECIFICATIONS SHEET

Hall Electrical Systems, Inc
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2575 28th Ave N, St. Petersburg, FL 33713
(813) 647-6693
License No: EC13008320

MARIA MELBA WILSON
3941 NE 33RD AVE
OCALA FL 34479

RICHARD PANTEL LICENSE No. 73222 STATE OF FLORIDA PROFESSIONAL ENGINEER

Reviewed and approved
Richard Pantel, P.E.
FL Lic. No. 73222
08/23/2024

SEAL

SIGNATURE

COVER/PV
SITE PLAN

DRAWN BY:	T.D.
REVIEWED BY:	B.C.

REVISIONS

N/A	

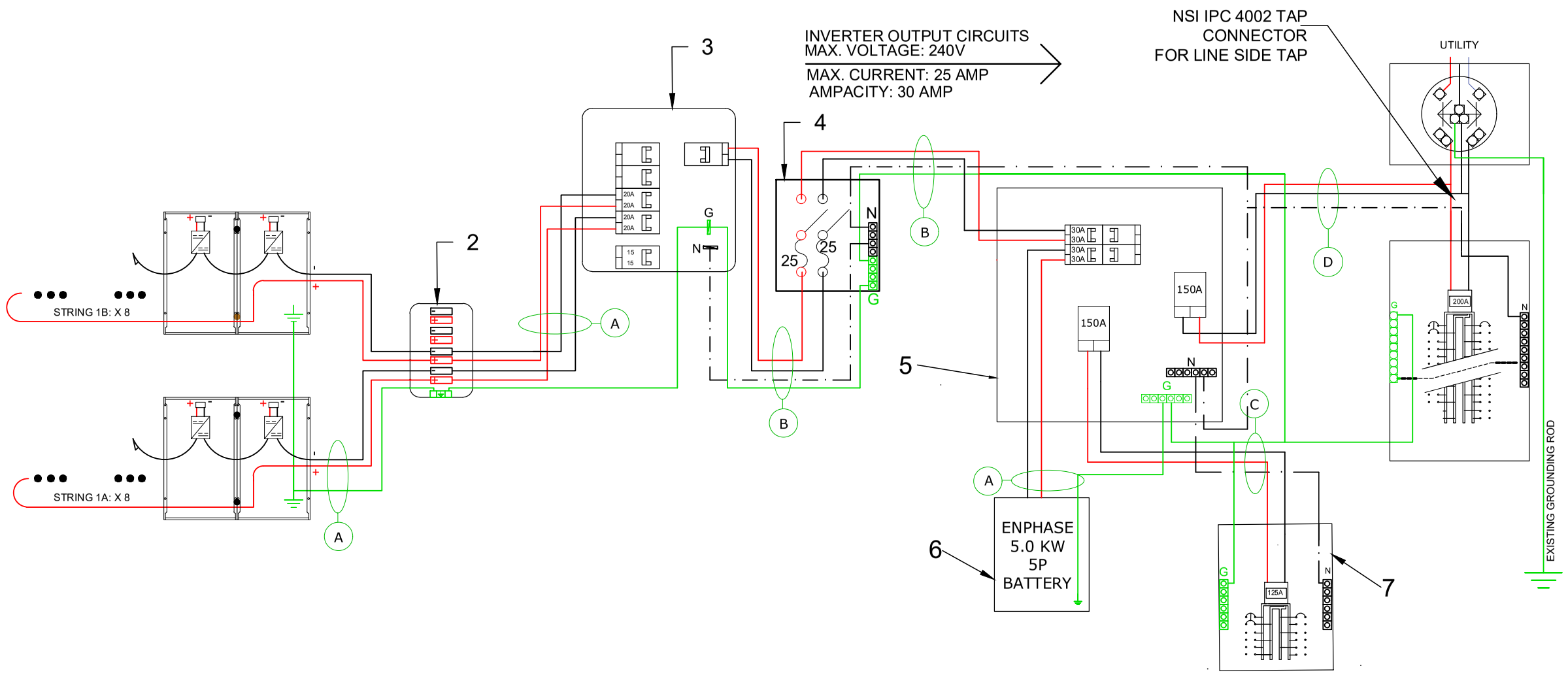
E-01

CONTRACT# ELE/250510

GENERAL NOTES:

1. ALL ASPECTS OF THE ELECTRICAL WORK REQUIRED TO COMPLETE THE PROJECT REPRESENTED IN THIS DOCUMENT SHALL COMPLY WITH THE MANUFACTURER'S RECOMMENDATIONS/SPECIFICATIONS AND ALL CODES, STATUTES, AND STANDARDS ADOPTED BY THE STATE AND THE LOCAL AUTHORITY HAVING JURISDICTION.
2. ALL COMPONENTS MUST BE GROUNDED PER NEC 690.43.
3. ALL EQUIPMENT SHALL BE LISTED PER NEC 690.4(D).
4. THE INFORMATION PROVIDED IN THESE DOCUMENTS IS NOT EXHAUSTIVE. IT REMAINS THE CONTRACTORS RESPONSIBILITY TO ACHIEVE THE PROPOSED INSTALLATION, IN FULL EXERCISE OF AND COMPLIANCE WITH THE ITEMS IDENTIFIED IN NOTE 1.
5. PER NEC690.17, PROVIDE A WARNING SIGN AT ALL LOCATIONS WHERE TERMINALS OF THE DISCONNECTING MEANS MAY BE ENERGIZED IN THE OPEN POSITION. SIGN SHALL READ "WARNING- ELECTRIC SHOCK HAZARD- DO NOT TOUCH TERMINALS-TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN OPEN POSITION" OR EQUIVALENT.
6. PER NEC705.10, PROVIDE A PERMANENT PLAQUE OR DIRECTORY SHOWING ALL ELECTRIC POWER SOURCES ON THE PREMISES AT SERVICE ENTRANCE.
7. INTERCONNECTION METHOD SHALL COMPLY WITH NEC705.12(B)(2).
8. PV PRODUCTION METER MAY OR MAY NOT BE REQUIRED BY THE AHJ AND/OR UTILITY FOR INTERCONNECTION.
9. CONDUCTOR SIZING OF THIS DESIGN IS BASED ON RACEWAYS NOT EXPOSED TO DIRECT SUNLIGHT. CONDUCTORS SHALL NOT EXCEED 10 FT EXPOSURE TO DIRECT SUNLIGHT.
10. UTILITY CONNECTION SHALL BE MADE BY LINE-SIDE TAP PER NEC ARTICLE 690.64(B)(2) LOCATED WITHIN CODE COMPLIANT ENCLOSURE.
11. ALL CONDUCTORS AND RACEWAYS SHALL BE SUPPORTED ON INTERVALS AND BY METHODS REQUIRED BY THE NEC.
12. THE MAXIMUM STRING LENGTH FOR THIS DESIGN SHALL BE 13 PER INVERTER. CONTRACTOR MAY FIELD ADJUST DC SOURCE CIRCUIT LENGTHS WITHIN THESE LIMITS.
13. CONTRACTOR SHALL COMPLY WITH SOLAR PROVISIONS 2018 NFPA 1
14. CONTRACTOR SHALL PROVIDE ADDITIONAL INFORMATION IF REQUIRED BY AHJ.
15. ALL INVERTERS ARE EQUIPPED W/ INTERNAL RAPID SHUTDOWN SYSTEM AS PER NEC 690.12.
16. ALL LINES TO HAVE TERMINATOR AND SEALING CAP INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS.
17. CONDUIT -EMT, PVC, OR FMC AS PER NEC 2020

TAG	DESCRIPT
1	MODULE TYPE:
	14 X TRINA 390
	INVERTER TYPE:
	ENPHASE IQ8PLUS-72-2-US
2	JUNCTION BOX:
	UNIRAC SOLOBOX ROOFTOP JUNCTION BOX
3	ENPHASE COMBINER PANEL
4	AC DISCONNECT LOCKABLE FUSED
5	ENPHASE SYSTEM CONTROLLER
6	ENPHASE 5P 5.0KW BATTERY
7	LOAD PANEL
A	#10 THWN-2 & #8 THWN-2 (G) / 3/4" CONDUIT - EMT, PVC, FMC
B	#10 THWN-2 & #10 THWN-2 (N) & #6 THWN-2 (G)/ 3/4" CONDUIT - EMT, PVC, FMC
C	#4 THWN-2 & #4 THWN-2 (N) & #6 THWN-2 (G)/ 1" CONDUIT - EMT, PVC, FMC
D	#2/0 THWN-2 & #2/0 THWN-2 (N) / 2" CONDUIT - EMT, PVC, FMC
G	#6 BARE GROUND



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RICHARD PANTEL LICENSE No. 73222 STATE OF FLORIDA PROFESSIONAL ENGINEER

Reviewed and approved
Richard Pantel, P.E.
FL Lic. No. 73222
08/23/2024

SEAL

SIGNATURE

LINE DIAGRAM

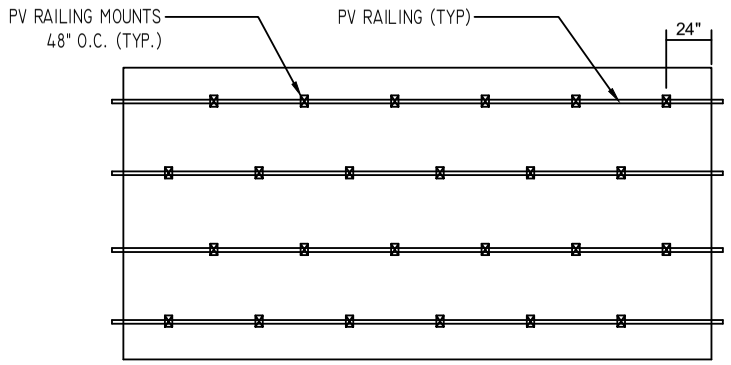
DRAWN BY:	T.D.
REVIEWED BY:	B.C.

REVISIONS

N/A	

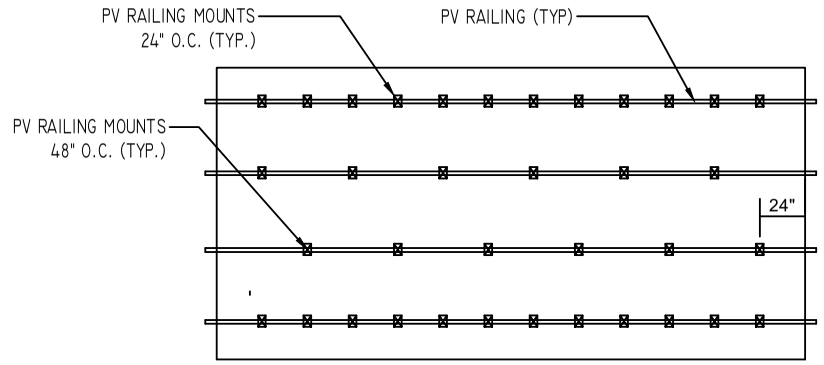
E-03

CONTRACT# ELE/250510



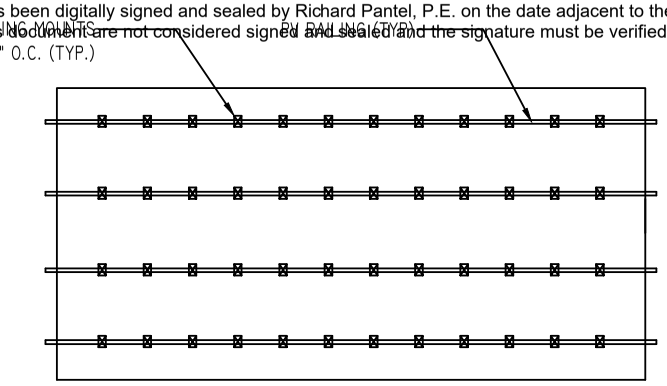
TYPICAL ZONE 1 LAYOUT

NOT TO SCALE



TYPICAL ZONE 2 LAYOUT

NOT TO SCALE



TYPICAL ZONE 3 LAYOUT

NOT TO SCALE

PV ARRAY

PV DEAD LOAD = 2.4 LB/SF

PV CONCENTRATED LOAD = 2.4 LB/FT2/ X 11.0 FT2/ = 26.4 LB/STANDOFF

LIVE LOADS ROOF: FBC 2020 1607.12.5.1 TABLE 1607.1

UNIFORM LR < 20 LB/SF CONCENTRATED < 300 LB

RAIL & ATTACHMENT:

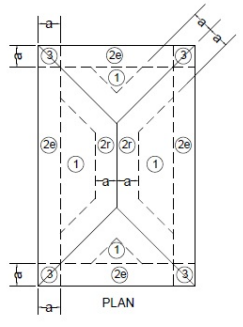
- PV MOUNTS ETL LISTED & CONFORM TO UL STD 2703
- PV MOUNTS SHALL BE INSTALLED STAGGERED ON TRUSSES WHERE POSSIBLE
- CONTRACTOR SHALL PROVIDE WATERPROOFING PER OEM INSTRUCTIONS

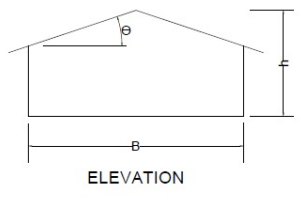
NOTES: IF A CONFLICT SHOULD OCCUR BETWEEN A DRAWING AND/OR SPECIFICATION HEREON AND AN OEM DETAIL, OEM SHALL PREVAIL.

1. SOLAR EQUIPMENT ADDS LESS THAN 3 PSF GRAVITY LOAD TO STRUCTURE.
2. MODULES SHALL BE INSTALLED PORTRAIT IN THE AREA SHOWN HERON. MODULE GRAVITY & WIND LOADS SHALL BE TRANSMITTED TO STRUCTURAL FRAMING OF ROOF USING DUAL RACK PV RAILING AND FLASHING SYSTEMS AS SHOWN IN SPECIFICATION SHEETS IN THIS PLAN SET AND OEM INSTRUCTION TO THIS PRODUCT.
3. EACH PV MODULE SHALL BE ATTACHED ON EACH SIDE BY MIN 2 PV MODULE CLAMPS.
4. ADJOINING MODULES SHALL SHARE PV MODULE CLAMPS.
5. THERE SHALL BE FOUR STANDARD ATTACHMENTS EACH PV MODULE.
6. CONTRACTOR SHALL LEAVE SUFFICIENT ROOF ACCESS IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 1 SECTION 11 BUILDING SERVICES
7. CONTRACTOR SHALL PROVIDE AHJ WITH OTHER INFORMATION AS REQUIRED SUCH AS OEM - MANUALS AND DATA SHEETS OF PRODUCTS USED IN THIS DESIGN.
8. ROOF LAYOUT DEPICTED ON THIS PLAN BASED ON CONTRACTOR SITE SURVEY. CONTRACTOR MAY FIELD ADJUST PANEL LAYOUT AND MODULE POSITIONS DUE TO ON SITE CONDITIONS AS LONG AS SUCH ADJUSTMENT DOES NOT INVALIDATED OTHER ENGINEERING REQUIREMENTS DESCRIBED IN THIS DOCUMENT. EOR (ENGINEER OF RECORD) IS PERMITTED TO USE SIGNATURE STAMP TO SIGN DOCUMENTS. FL BOARD OF ENGINEERS GRANTED WAIVER OR VARIANCE OF RULE 61G15-23.002(1), FAC.

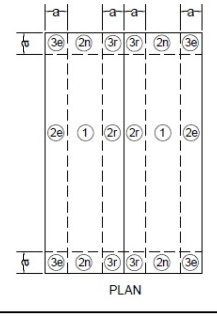
PV CERTIFICATION: IN ACCORDANCE WITH FLORIDA HB 1021, ENGINEER OF RECORD FOR THIS PLAN CERTIFIES THAT, THE BEST TO MY KNOWLEDGE AND BELIEF, ALL ELECTRICAL & STRUCTURAL COMPONENTS & THE DESIGN OF THE SYSTEM HEREIN SPECIFIED SATISFY ALL FLORIDA REQUIREMENTS APPLICABLE TO THIS PV INSTALLATION.

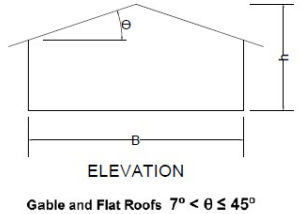
ACTUAL PV ARRAY LAYOUTS MAY VARY DUE TO UNFORESEEN FIELD CONDITIONS AS LONG AS ALL PV RACKING ATTACHMENT POINTS DO NOT EXCEED THE PRE-ENGINEERED MAX SPAN OUTLINED BY THE RACKING MANUFACTURES ENGINEER OF RECORD.





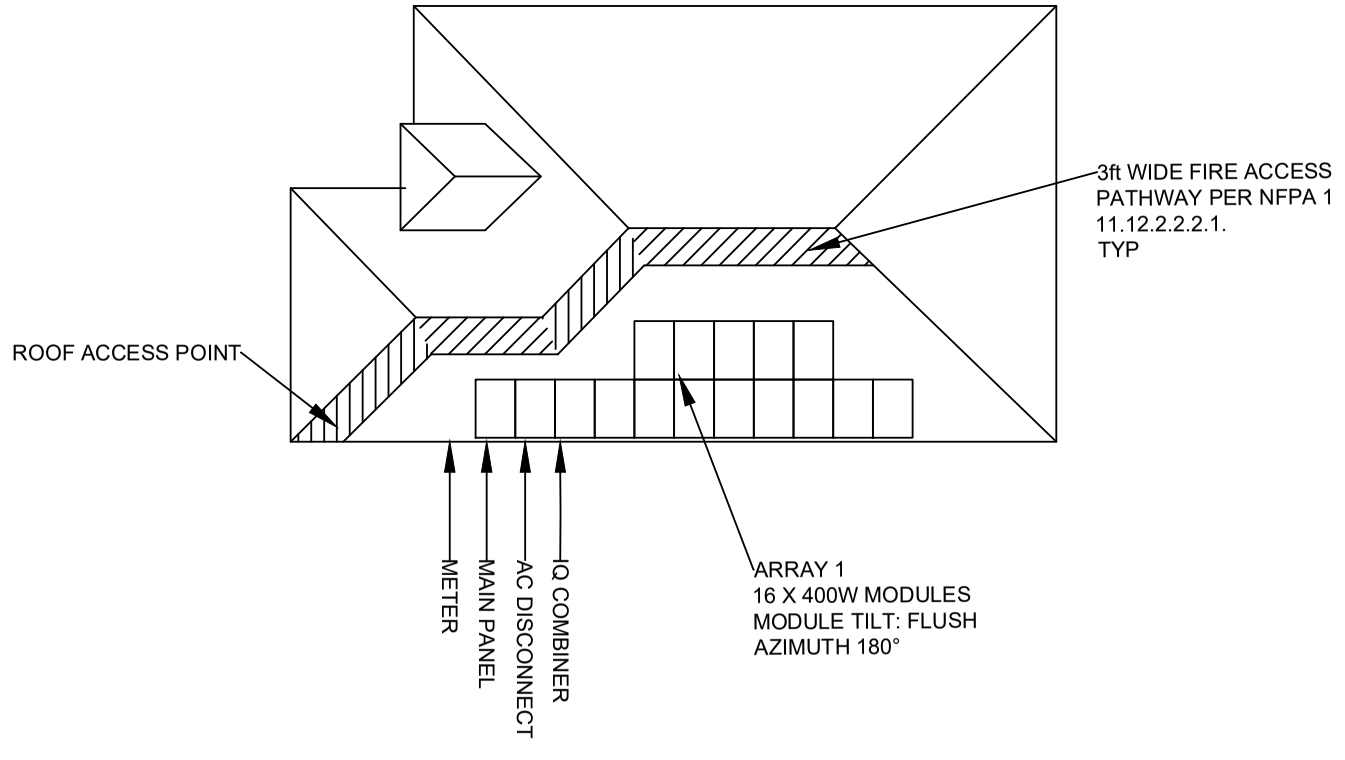
Hip Roofs $7° < \theta \leq 45°$





Gable and Flat Roofs $7° < \theta \leq 45°$

WINDSPEED DESIGN DATA PER FBCR 2020		
WIND SPEED	130 MPH	
RISK CATEGORY	II	
EXPOSURE	C	
GUST FACTOR	±0.18	
"A" DIMENSION	3 Ft	
ROOF PRESSURE FOR COMPONENTS AND CLADDING		
GABLE ROOF		
ZONE 1	+13.6 PSF	-33.7 PSF
ZONE 2E	+13.6 PSF	-33.7 PSF
ZONE 2N	+13.6 PSF	-49.2 PSF
ZONE 2R	+13.6 PSF	-49.2 PSF
ZONE 3E	+13.6 PSF	-49.2 PSF
HIP ROOF		
ZONE 1	+13.6 PSF	-30.6 PSF
ZONE 2R	+13.6 PSF	-39.9 PSF
ZONE 2E	+13.6 PSF	-43.0 PSF
ZONE 3	+13.6 PSF	-43.0 PSF



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RICHARD PANTEL LICENSE No. 73222 STATE OF FLORIDA PROFESSIONAL ENGINEER

Reviewed and approved
Richard Pantel, P.E.
FL Lic. No. 73222
08/23/2024

SEAL

SIGNATURE

PV ATTACH PLAN

DRAWN BY:	T.D.
REVIEWED BY:	B.C.

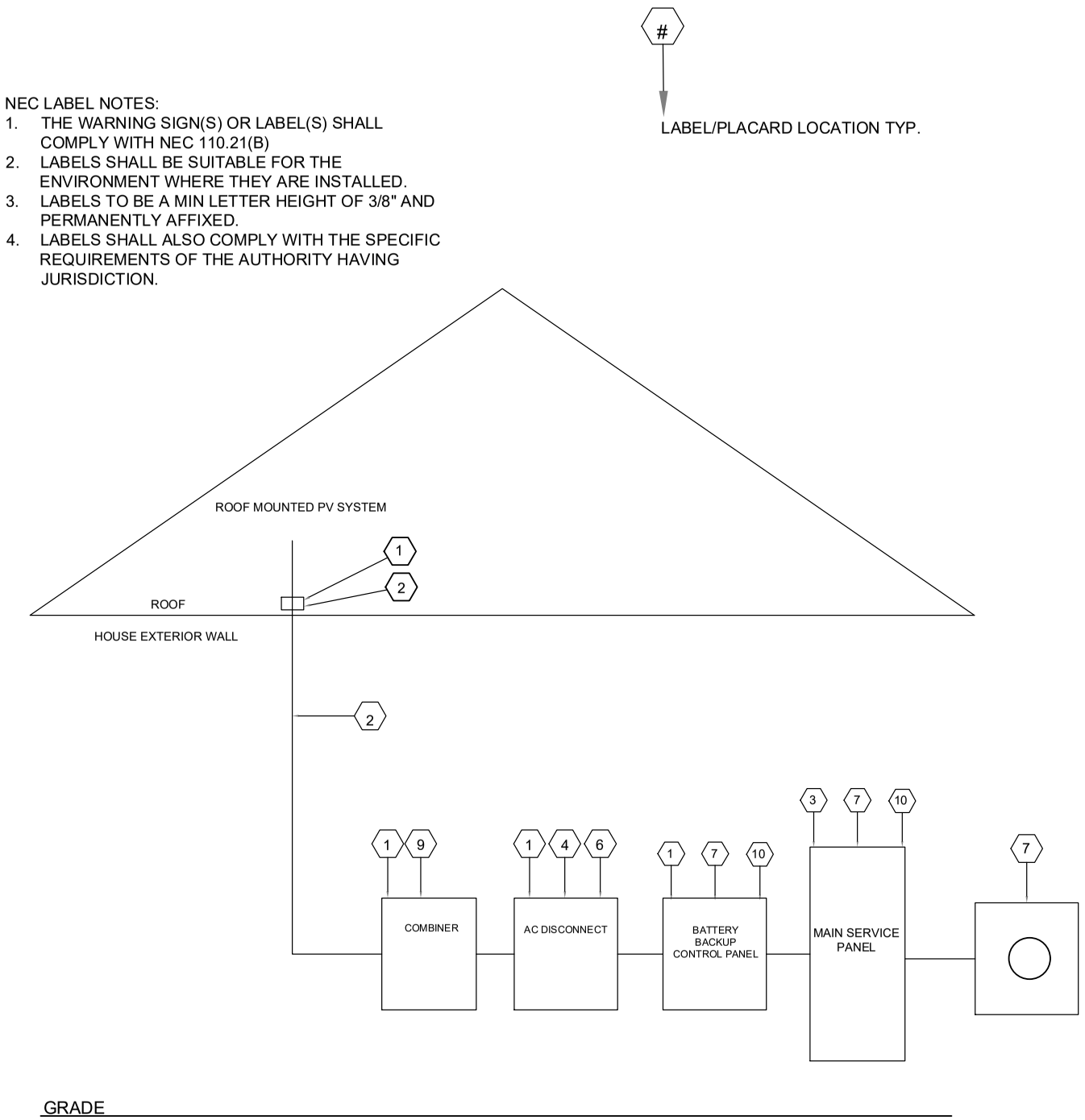
REVISIONS

N/A	

E-02

CONTRACT# ELE/250510

NEC LABEL NOTES:
1. THE WARNING SIGN(S) OR LABEL(S) SHALL COMPLY WITH NEC 110.21(B)
2. LABELS SHALL BE SUITABLE FOR THE ENVIRONMENT WHERE THEY ARE INSTALLED.
3. LABELS TO BE A MIN LETTER HEIGHT OF 3/8" AND PERMANENTLY AFFIXED.
4. LABELS SHALL ALSO COMPLY WITH THE SPECIFIC REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.



PLACARD RISER DIAGRAM

NTS

LABEL 1 - NEC 690.13(B)
APPLY TO DISCONNECTING MEANS WHERE THE LINE AND LOAD TERMINALS MAY BE ENERGIZED IN THE OPEN POSITION

! WARNING !
ELECTRIC SHOCK HAZARD
TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

LABEL 2 - NEC 690.31(G)(4)
APPLY TO EXPOSED RACEWAYS, CABLE TRAYS, OTHER WIRING METHODS, COVERS, ENCLOSURES OF PULL BOXES, AND J-BOXES. SPACING BETWEEN LABELS OR MARKINGS SHALL NOT BE MORE THAN 10FT APART.

WARNING: PHOTOVOLTAIC POWER SOURCE

LABEL 3 - NEC 690.56 (C)(1)(a)
APPLY TO LABEL ON OR NO MORE THAN 3FT FROM THE SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED AND SHALL INDICATE THE LOCATION OF ALL IDENTIFIED RAPID SHUTDOWN SWITCHES IF NOT AT THE SAME LOCATION

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN
3/8 IN MIN. TEXT
TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN THE ARRAY.
SOLAR ELECTRIC PV PANELS
3/16 IN MIN. TEXT

LABEL 4 - NEC 690.56(B) & NFPA 11.12.2.1.1.6
APPLY TO RAPID SHUTDOWN SWITCH PV SYSTEM COMMENCES RAPID SHUTDOWN SEQUENCE UPON DISCONNECT FROM AC SOURCE - COMPLIES WITH NEC 690.12

INITIATION DEVICE SHALL BE LOCATED AT A READILY ACCESSIBLE LOCATION OUTSIDE THE BUILDING(LABEL SHALL BE WITHIN 3FT OF SWITCH)

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM
3/8 IN MIN. TEXT

LABEL 5 - 690.53(IF APPLICABLE)
APPLY TO DC DISCONNECT/INVERTER

PHOTOVOLTAIC SYSTEM ! DC DISCONNECT !
MAX SYSTEM VOLTAGE: 480VDC
MAX CIRCUIT CURRENT: 12A
MAX OUT CURRENT(DC TO DC CONV.): 15A

LABEL 6 - NEC 690.54
APPLY TO MAIN PV AC DISCONNECT

PHOTOVOLTAIC SYSTEM ! AC DISCONNECT !
RATED AC OUTPUT CURRENT: 25x1.21x1.25 = 37.8125A
NOMINAL OPERATING VOLTAGE: 240VAC

LABEL 7 - NEC 705.12(B)(3)
APPLY TO MSP

! WARNING !
DUAL POWER SUPPLY
SOURCES: UTILITY GRID AND PV SOLAR ELECTRIC SYSTEM

LABEL 8 - NEC 705.12(B)(2)(3)(b)
APPLY TO BACK-FED BREAKER, IF APPLICABLE

! WARNING !
POWER SOURCE OUTPUT CONNECTION: DO NOT RELOCATE THIS OVERCURRENT DEVICE

LABEL 9 - NEC 705.12(B)(2)(3)(c)
PROVIDE AT PV COMBINER OR MSP IF APPLICABLE

! WARNING !
DEDICATED SOLAR PANEL DO NOT CONNECT ANY OTHER LOADS

LABEL 10 - NFPA 1, 11.12.2.1.5
INSTALLER INFORMATION LOCATED ADJACENT TO THE MAIN DISCONNECT, INDICATING THE NAME AND EMERGENCY TELEPHONE NUMBER OF THE COMPANY

IN CASE OF EMERGENCY
HES Hall Electrical Systems, Inc
(813) 647-6693

Hall Electrical Systems, Inc
EC# 13008320 Licensed & Insured
2575 28th Ave N, St. Petersburg, FL 33713
(813) 647-6693
License No: EC13008320

MARIA MELBA WILSON
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OCALA FL 34479

RICHARD PANTEL LICENSE No. 73222 STATE OF FLORIDA PROFESSIONAL ENGINEER

Reviewed and approved
Richard Pantel, P.E.
FL Lic. No. 73222
08/23/2024

SEAL

SIGNATURE

ELEVATION/ PLACARDS

DRAWN BY:	T.D.
REVIEWED BY:	B.C.

REVISIONS

N/A	

E-04

CONTRACT# ELE/250510

ENPHASE.

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.

Enphase 25 year limited warranty

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

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

UL CERTIFIED SAFETY

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

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

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

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

IQ8 and IQ8+ Microinverters

INPUT DATA (DC)		IQ8-60-2-US	IQ8PLUS-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)		**IQ8-60-2-US**	**IQ8PLUS-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	Arms	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		1.08 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. 107.1-01 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

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INVERTER SPECS

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REVIEWED BY: B.C.

REVISIONS

N/A	

E-06

CONTRACT# ELE/250510

Hi-MO 5m

LR5-54HPB
400~420M

- Suitable for distributed projects
- Advanced module technology delivers superior module efficiency
  - M10 Gallium-doped Wafer · Integrated Segmented Ribbons · 9-busbar Half-cut Cell
- Excellent outdoor power generation performance
- Aesthetic appearance with all black module design

15-year Warranty for Materials and Processing

25-year Warranty for Extra Linear Power Output

Complete System and Product Certifications

IEC 61215, IEC 61730, UL 61730
ISO9001:2015: ISO Quality Management System
ISO14001: 2015: ISO Environment Management System
ISO45001: 2018: Occupational Health and Safety
TS62941: Guideline for module design qualification and type approval

LONGi

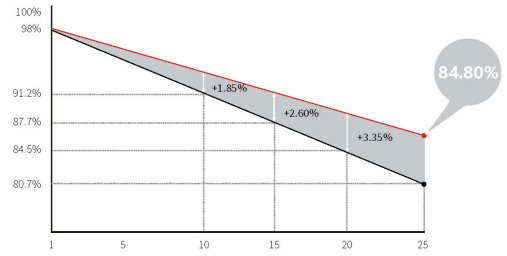
Hi-MO 5m

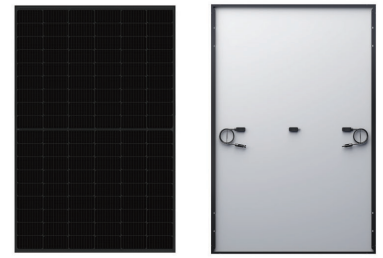
LR5-54HPB 400~420M

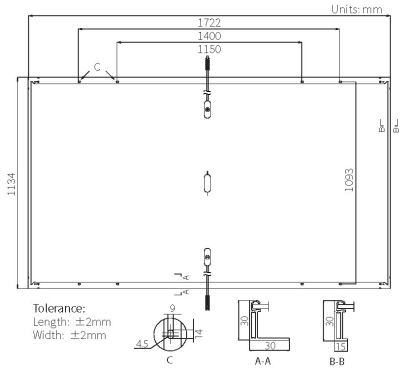
21.5%	0~3%	<2%	0.55%	HALF-CELL
MAX MODULE EFFICIENCY	POWER TOLERANCE	FIRST YEAR POWER DEGRADATION	YEAR 2-25 POWER DEGRADATION	Lower operating temperature

Additional Value

25-Year Power Warranty







Mechanical Parameters

Cell Orientation	108 (6×18)
Junction Box	IP68, three diodes
Output Cable	4mm², 1200mm
Connector	Staubli MC4
Glass	Single glass, 3.2mm coated tempered glass
Frame	Anodized aluminum alloy frame
Weight	20.8kg
Dimension	1722×1134×30mm
Packaging	36pcs per pallet / 216pcs per 20' GP / 936pcs per 40' HC

Electrical Characteristics

STC : AM1.5 1000W/m² 25°C NOCT : AM1.5 800W/m² 20°C 1m/s Test uncertainty for Pmax: ±3%

Module Type	LR5-54HPB-400M		LR5-54HPB-405M		LR5-54HPB-410M		LR5-54HPB-415M		LR5-54HPB-420M	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	400	299.0	405	302.7	410	306.5	415	310.2	420	313.9
Open Circuit Voltage (Voc/V)	36.90	34.70	37.15	34.93	37.40	35.17	37.65	35.40	37.89	35.63
Short Circuit Current (Isc/A)	13.72	11.09	13.78	11.14	13.84	11.19	13.91	11.24	13.97	11.30
Voltage at Maximum Power (Vmp/V)	30.94	28.74	31.18	28.96	31.42	29.19	31.66	29.41	31.90	29.63
Current at Maximum Power (Imp/A)	12.93	10.40	12.99	10.45	13.05	10.50	13.11	10.55	13.17	10.59
Module Efficiency(%)	20.5		20.7		21.0		21.3		21.5	

Operating Parameters

Operational Temperature	-40°C ~ +85°C
Power Output Tolerance	0 ~ 3%
Voc and Isc Tolerance	±3%
Maximum System Voltage	DC1000V (IEC/UL)
Maximum Series Fuse Rating	25A
Nominal Operating Cell Temperature	45±2°C
Protection Class	Class II
Fire Rating	UL type 1 or 2 IEC Class C

Mechanical Loading

Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s

Temperature Ratings (STC)

Temperature Coefficient of Isc	+0.050%/°C
Temperature Coefficient of Voc	-0.265%/°C
Temperature Coefficient of Pmax	-0.340%/°C

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MODULE SPECS

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REVIEWED BY: B.C.

REVISIONS

N/A	

E-05

ENPHASE.

DATA SHEET

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

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 5P.

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

IQ Series Microinverters
The high-powered smart grid-ready IQ Series Microinverters (IQ6, IQ7, and IQ8 Series) 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.

5-year limited warranty

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 entries
- 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
- 2-year labor reimbursement program coverage included for both the IQ Combiner SKUs*
- UL1741 Listed

*For country-specific warranty information, see the https://enphase.com/installers/resources/warranty page.

IQ Combiner 5/5C

MODEL NUMBER	
IQ Combiner 5 (X-IQ-AM1-240-5)	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-AM1-240-5C)	IQ Combiner 5C with IQ Gateway printed circuit board for integrated revenue-grade PV production metering (ANSI C12.20 ±0.5%), consumption monitoring (±2.5%) and IQ Battery monitoring (±2.5%). Includes Enphase Mobile Connect cellular modem (CELLMODEM-M1-06-SP-05)[1]. 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 Energy System
Busbar	80 A busbar with support for 1 × IQ Gateway breaker and 4 × 20 A breaker for installing IQ Series Microinverters and IQ Battery 5P
IQ Gateway breaker	Circuit breaker, 2-pole, 10 A/15 A
Production CT	Pre-wired 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 5P
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 the COMMS-KIT-02 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 BR2XX, Siemens Q2XX and GE/ABB THQL21XX Series circuit breakers (XX represents 10, 15, 20, 30, 40, 50, or 60). Also supports Eaton BR220B, BR230B, and BR240B circuit breakers compatible with the 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 the "Accessories" section)
XA-SOLARSHIELD-ES	Replacement solar shield for IQ Combiner 5/5C
XA-ENV2-PCBA-5	IQ Gateway replacement printed circuit board (PCB) for IQ Combiner 5/5C
X-IQ-NA-HD-125A	Hold-down kit compatible with Eaton BR-B Series circuit breakers (with screws)
XA-COMMS2-PCBA-5	Replacement COMMS-KIT-02 printed circuit board (PCB) for IQ Combiner 5/5C
ELECTRICAL SPECIFICATIONS	
Rating	80 A
System voltage and frequency	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, Siemens Q, or GE/ABB THQL 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

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

IQC-5-5C-DSH-00007-3.0-EN-US-2024-03-01

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SPECIFICATIONS SHEETS

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REVISIONS

N/A	

E-12

CONTRACT# ELE/250510

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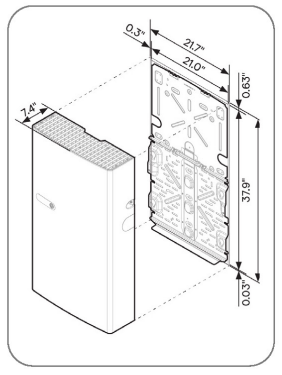
DATA SHEET

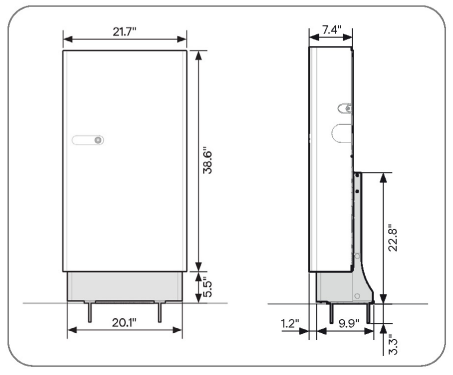
IQ Battery 5P

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 kVA 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)

Enphase 15 year limited warranty

LISTED

UL 9540A Certified

Powerful

- Provides 3.84 kVA continuous and 7.68 kVA peak power
- Doubles the available power per kWh of prior generations of IQ Battery
- Includes six embedded IQ8D-BAT (SKU: IQ8D-BAT-240) Microinverters

Reliable

- 15-year limited warranty
- Cools passively with no moving parts or fans
- Uses wired communication for fast and consistent connection
- Updates software and firmware remotely

Simple

- Fully integrated AC battery system
- Installs and commissions easily
- Supports Backup, Self-Consumption, and time-of-use (TOU) modes
- Offers homeowners remote monitoring and control from the Enphase App
- Field replaceable components

Safe

- Evaluated to UL 9540A for large scale fire testing and reduced separation distance as required in 2021 IRC R328.3.1, 2021 IFC 1207.1.5, and 2023 NFPA 855 15.3.1 and 9.1.5.[1]
- Uses lithium iron phosphate (LFP) chemistry for maximum safety and longevity

[1] Follow all Installation Instructions and local codes and requirements of the Authority Having Jurisdiction (AHJ) when installing Enphase Energy System.

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 UL 9540A
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 EMI/EMC requirement
Cable ties	Six cable ties for securing field cables to the unit
Control (CTRL) connector	Spare CTRL connector without resistor for CTRL wiring
Control (CTRL) connector with resistor	Spare CTRL connector with resistor for CTRL wiring
Quick install guide (QIG)	QIG for IQ Battery unit installation instructions
OPTIONAL ACCESSORIES AND REPLACEMENT PARTS	
IQ8D-BAT-RMA	IQ8D-BAT Microinverter for field replacement
B05-T02-US00-1-3-RMA	IQ Battery 5P Battery unit for field replacement
B05-CX-0550-O	IQ Battery 5P cover for field replacement
B05-PI-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-HNDL-5	IQ Battery 5P lifting handles. Includes one left-side and one right-side lifting handle
B05-ACFB-080-O	IQ Battery 5P AC filter board for field replacement
B05-BMSNA-0490-O	IQ Battery 5P BMS board for field replacement
B05-CANB-063-O	IQ Battery 5P control communication board for field replacement
B05-NICS-0524-O, B05-NJCS-0524-O	IQ Battery 5P control switch is preinstalled on the wiring cover for field replacement
OUTPUT (AC)	**@240 VAC[2]**
Rated (continuous) output power	3.84 kVA
Peak output power	7.68 kVA (3 seconds), 6.14 kVA (10 seconds)
Nominal voltage/range	240/211–264 VAC
Nominal frequency/range	60/57–63 Hz
Rated output current (@240 VAC)	16 A
Peak output current (@240 VAC)	32 A (3 seconds), 25.6 A (10 seconds)
Power Start capability	Up to 48 A LRA[3]
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[4]	90%

[2] Supported in both grid-connected and backup/off-grid operations.
[3] Power Start capability may vary.
[4] AC to the battery to AC at 50% power rating.

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REVISIONS

N/A	

E-13

CONTRACT# ELE/250510

Data Sheet
Enphase Energy System

Compatible with M-Series, IQ6, IQ7, or IQ8 Microinverters

IQ System Controller 2

The **IQ System Controller 2** connects the home to grid power, the IQ Battery system, and solar PV. It provides microgrid interconnection device (MID) functionality by automatically detecting and seamlessly transitioning 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 and streamlines grid independent capabilities of PV and storage installations by providing a consistent, pre-wired solution for residential applications.

Easy to Install

- Connects to service entrance[1] or main load center
- Supports main breaker
- Includes neutral-forming transformer
- Mounts on single stud with centered brackets
- Provides conduit entry from bottom, left, or right
- Includes color coded wires for ease of wiring Enphase Energy System Shutdown Switch

Flexible

- Can be used for Sunlight Backup, Home Essentials Backup, or Full Energy Independence
- Integrates with select AC standby generators. See Generator Integration Tech Brief for list of generators

Safe and Reliable

- Enphase Energy System Shutdown Switch can be used to disconnect PV, battery, and generator systems
- It acts as a rapid shutdown initiator of grid forming IQ8 PV Microinverters for safety of maintenance technicians/first responders
- IQ System Controller 2 has a 10-year limited warranty

1. IQ System Controller 2 is not suitable for use as service equipment in Canada.

To learn more about Enphase offerings, visit **enphase.com**

ENPHASE.

IQ System Controller 2

MODEL NUMBERS		
EP200G101-M240US01 **NOTE:** No longer sold separately.	IQ System Controller 2 with neutral-forming transformer (NFT), and microgrid interconnect device (MID). Streamlines grid-independent capabilities of PV and storage installations.	
EP200G-SC2-RSD-KIT	Includes above plus Enphase Energy System Shutdown Switch (EP200G-NA-02-RSD) with red, black, orange and purple 12 AWG wires, and breaker for powering IQ Gateway (refer to figure 1).	
EP200G-SC2-RSD-BRK-KIT	Includes above plus three Eaton BR220B breakers for either IQ System Controller 2 or IQ Combiner, two BR240B breakers and one BR260 breaker for IQ System Controller 2, two X-IQ-NA-HD-125A hold-down kits for IQ Combiner, and two EP200G-NA-HD-200A hold-down kits for IQ System Controller 2 (refer to figures 2A and 2B).	
ACCESSORIES and REPLACEMENT PARTS (ORDER SEPARATELY AS NEEDED)		
EP200G-NA-XA-E3	Replacement IQ System Controller 2 printed circuit board	
EP200G-NA-HD-200A	Eaton type BR circuit breaker hold-down kit, BRHDK125	
CT-200-SPLIT	200A split core current transformer for generator metering (± 2.5% accuracy)	
Circuit breakers (as needed)[2,3]		
• BRK-100A-2P-240V: Main breaker, 2 pole, 100A, 25kAIC, Eaton CSR2100N • BRK-125A-2P-240V: Main breaker, 2 pole, 125A, 25kAIC, Eaton CSR2125N • BRK-150A-2P-240V: Main breaker, 2 pole, 150A, 25kAIC, Eaton CSR2150N • BRK-175A-2P-240V: Main breaker, 2 pole, 175A, 25kAIC, Eaton CSR2175N • BRK-200A-2P-240V: Main breaker, 2 pole, 200A, 25kAIC, Eaton CSR2200N	• BRK-20A-2P-240V-B: Circuit breaker, 2 pole, 20A, 10kAIC, Eaton BR220B • BRK-30A-2P-240V-B: Circuit breaker, 2 pole, 30A, 10kAIC, Eaton BR230B • BRK-40A-2P-240V-B: Circuit breaker, 2 pole, 40A, 10kAIC, Eaton BR240B • BRK-60A-2P-240V: Circuit breaker, 2 pole, 60A, 10kAIC, Eaton BR260 • BRK-80A-2P-240V: Circuit breaker, 2 pole, 80A, 10kAIC, Eaton BR280	
BRK-20A40A-2P-240V	Quad breaker, 20A/40A, 10kAIC, Eaton BQC220240	
EP200G-HNDL-R1	IQ System Controller 2 installation handle kit	
EP200G-LITKIT	IQ System Controller 2 literature kit, including labels, feed-through headers, screws, filler plates, and QIG	
EP200G-NA-02-RSD	2 pole Enphase Energy System Shutdown Switch	
ELECTRICAL SPECIFICATIONS		
Nominal voltage/range (L-L)	240 VAC/±20%	
Voltage measurement accuracy	±1% (±1.2V L-N and ±2.4V L-L)	
Auxiliary/Dry contact for load control, excess PV control, and generator two-wire control	24V, 1A	
Nominal frequency/range	60 Hz/56 - 63 Hz	
Frequency measurement accuracy	±0.1 Hz	
Maximum continuous current rating	160A	
Maximum input overcurrent protection device[4]	200A	
Maximum output overcurrent protection device[4]	200A	
Maximum overcurrent protection device rating for generator circuit	80A	
Maximum overcurrent protection device rating for storage circuit	80A	
Maximum overcurrent protection device rating for PV combiner circuit	80A	
Internal busbar rating	200A	
Neutral Forming Transformer (NFT) • Breaker rating (pre-installed): 40A between L1 and neutral; 40A between L2 and neutral • Continuous rated power: 3600VA	• Maximum continuous unbalanced current: 30A @ 120V • Peak rated power: 8800VA for 30 seconds • Peak unbalanced current: 80A @ 120V for 30 seconds	
MECHANICAL DATA		
Dimensions (WxHxD)	50cm x 91.6cm x 24.6cm (19.7 in x 36 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, solar shield	
Enclosure environmental rating	Outdoor, NEMA type 3R, polycarbonate construction	
Maximum altitude	2500 meters (8200 feet)	
WIRE SIZES		
Connections (All lugs are rated to 90C)	• Main lugs and backup load lugs • CSR breaker bottom wiring lugs • AC combiner lugs, IQ Battery lugs, and generator lugs • Neutral lugs	Cu/Al: 1 AWG – 300 KCM IL Cu/Al: 2 AWG – 300 KCM IL 14 AWG – 2 AWG Cu/Al: 6 AWG – 300 KCM IL
Neutral and ground bars	Large holes (5/16-24 UNF) Small holes (10-32 UNF)	14 AWG – 1/0 AWG 14 AWG – 6 AWG
COMPLIANCE		
Compliance	UL1741, UL1741 SA, UL1741 SB, UL1741 PCS CRD, UL1998, UL869A[5], UL67[5], UL508[5], UL50E[5] CSA 22.2 No. 107.1, 47 CFR Part 15 Class B, ICES 003, ICC ES AC156. IQ System Controller 2 is approved for use as service equipment in the United States IFETEL homologation number: RCPENEP22-2078	

2. Compatible with BRHDK125 hold-down kit to comply with 2017 NEC 710.15E for back-fed circuit breakers.
3. The IQ System Controller 2 is rated at 22 kAIC.
4. CSR breakers are not included in EP200G-SC2-RSD-BRK-KIT. Installer must provide correctly rated breakers.
5. Sections from these standards were used during the safety evaluation and included in the UL1741 listing.

IQSC-2-DS-0087-01-EN-US-12-06-2022

HES
Hall Electrical Systems, Inc
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License No: EC13008320

MARIA MELBA WILSON
3941 NE 33RD AVE
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SEAL

SIGNATURE

SPECIFICATIONS SHEETS

DRAWN BY: T.D.
REVIEWED BY: B.C.

REVISIONS

N/A	

E-14

CONTRACT# ELE/250510

Certificate Of Completion

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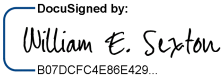
William E. Sexton wsexton@ocalafl.org City Attorney City of Ocala Security Level: Email, Account Authentication (None)	DocuSigned by:  B07DCFC4E86E429... Signature Adoption: Pre-selected Style Using IP Address: 216.255.240.104	Sent: 3/21/2025 8:54:46 PM Viewed: 3/24/2025 10:50:20 AM Signed: 3/24/2025 10:52:30 AM
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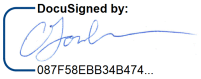
Chris Gowder chris.gowder@fmpa.com Chief Sys Ops & Tech Officer Security Level: Email, Account Authentication (None)	DocuSigned by:  087F58EBB34B474... Signature Adoption: Uploaded Signature Image Using IP Address: 38.77.131.2	Sent: 3/25/2025 2:44:07 PM Viewed: 3/25/2025 2:45:59 PM Signed: 3/25/2025 2:46:13 PM
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Envelope Sent	Hashed/Encrypted	3/21/2025 8:54:47 PM
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