

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: Timothy L. Pontious
Mailing Address: 14151 DE 3rd Ave
City: Ocala State: FL Zip Code: 34479
Phone Number: 352-209-2159 Alternate Phone Number: 352-209-2159
Email Address: tpontious@gmail.com Fax Number: _____
Ocala Electric Utility Customer Account Number: 543604-189488

2. RGS Facility Information

Facility Location: Pool room
Ocala Electric Utility Customer Account Number: 543604-189488
RGS Manufacturer: Silfab & Enphase
Manufacturer's Address: 1011A
Reference or Model Number: Silfab SIL-L100HC & Enphase IQ8PLUS
Serial Number: SIL-L100HC & Enphase IQ8PLUS-72-2-15

(Continued on Sheet No.19.1)

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

Effective: October 1, 2019

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3. Facility Rating Information

Gross Power Rating: 10kw *DC, 8.5kw AC* ("Gross power rating" means the total manufacturer's AC nameplate generating capacity of an on-site customer-owned renewable generation system that will be interconnected to and operate in parallel with Ocala Electric Utility's distribution facilities. For inverter-based systems, the AC nameplate generating capacity shall be calculated by multiplying the total installed DC nameplate generating capacity by 0.85 in order to account for losses during the conversion from DC to AC.)

Fuel or Energy Source: Photovoltaic Solar

Anticipated In-Service Date: 11/9/2023

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

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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: _____
(Print Name)

Date: _____

(Signature)

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Electric Utility Director

Effective: October 1, 2019

**RLI Insurance Company**

Peoria, IL 61615

A stock insurance company, herein called the Company

PERSONAL UMBRELLA LIABILITY POLICY

This Declarations page with "Policy Provisions" and endorsements completes this policy.

DECLARATIONS

Policy Number	PUP2187276	9/21/2023
Named Insured & Mailing Address	Agent	
TIMOTHY PONTIOUS	E5611 GEICO Insurance Agency, LLC	
MASHON PONTIOUS	(855) 820-5807	
4134 NE 22ND AVE	PO Box 5578	
OCALA, FL 34479	Fredericksburg, VA 22412	
Primary Residence Address (if different than above)	Insured's Brokering Agent	
Same As Above	E6780 GEICO	
Policy Period – 12:01 A.M. standard time at the address of the Named Insured as stated herein.	From 09/22/2023	To 09/22/2024
Limit of Coverage	\$ 1,000,000	each occurrence
Fire, Weapon and Unmanned Aircraft Aggregate Limit	\$ 1,000,000	
Excess Uninsured/Underinsured Motorists		
Limit of Coverage	\$	each accident
Policy Premium \$533	FIGA Surcharge \$4	Total Annual Premium \$537
Forms included at issuance of policy will appear on Page 2 of this Declaration.		
REQUIRED BASIC POLICIES		
You agree that you and any Relative covered by this policy will be insured under the applicable Basic Policies for at least the Required Minimum Limits of Coverage listed below through the entire Policy Period for the following:		
1. Any Automobile you or your Relative own or operate;		
2. Any home, seasonal, secondary or rental property, or farm, you or your Relative own, reside in, lease or rent; and		
3. Any Recreational Vehicles or Watercraft , you or your Relative own or operate.		
<u>Basic Policy</u>	<u>Required Minimum Limit of Coverage</u>	
A. Automobile Liability	Bodily Injury	\$ 100,000 each person
		\$ 300,000 each occurrence
	Property Damage	\$ 50,000 each occurrence

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Basic Policy		Required Minimum Limit of Coverage	
B. Uninsured/Underinsured Motorists	Bodily Injury	\$	each person
		\$	each occurrence
	Property Damage	\$	each occurrence
Not Applicable. UM/UIM was rejected by insured.			
C. Personal Liability for:			
1. PRIMARY RESIDENCE			
Homeowners or Personal Liability	Bodily Injury and Property Damage Combined Single Limit	\$	300,000 each occurrence
2. SEASONAL, SECONDARY OR RESIDENTIAL RENTAL PROPERTIES			
Comprehensive Personal Liability or Premises Liability	Bodily Injury and Property Damage Combined Single Limit	\$	300,000 each occurrence
3. FARM			
Farmowners or Comprehensive Personal Liability	Bodily Injury and Property Damage Combined Single Limit	\$	300,000 each occurrence
D. Recreational Vehicle Liability	Bodily Injury	\$	100,000 each person
		\$	300,000 each occurrence
	Property Damage	\$	25,000 each occurrence
			or
	Bodily Injury and Property Damage Combined Single Limit	\$	100,000 each occurrence
E. Watercraft Liability (including, but not limited to, personal watercraft)	Bodily Injury	\$	300,000 each person
		\$	300,000 each occurrence
	Property Damage	\$	100,000 each occurrence
			or
	Bodily Injury	\$	250,000 each person
		\$	500,000 each occurrence
	Property Damage	\$	100,000 each occurrence
			or
	Bodily Injury and Property Damage Combined Single Limit	\$	300,000 each occurrence

Forms included at issue:

PUP 320 (01/21) POLICY PROVISIONS

PUA 409 (01/21) STATE AMENDATORY

ILF 0001 FL (04/22) Signature Page - Florida

Insured's Brokering Agent

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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 21st day of Sept, 2023, 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 Timothy L Pontiacis, 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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Issued by: Michael Poucher, P.E.
Electric Utility Director

Effective: October 1, 2019

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

Effective: October 1, 2019

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

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

Section 5. Renewable Energy Credits

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

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

Section 6. Term and Termination

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

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

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

Effective: October 1, 2019

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Section 7. Miscellaneous Provisions

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

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

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

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

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

Effective: October 1, 2019

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

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

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

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

Effective: October 1, 2019

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

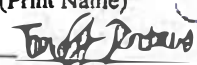
City of Ocala Electric Utility

By: 
Title: CFO
Date: 11/17/2023

Florida Municipal Power Agency

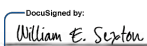
By: 
Title: VP of IT/OT and System Ops
Date: 11/17/2023

Customer

By: Timothy L. Pontius Date: 11/21/23
(Print Name)

(Signature)

Customer's City of Ocala Electric Utility Account Number: 543604-1894188

Approved as to form and legality:


William E. Sexton
City Attorney

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

Effective: October 1, 2019

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OCALA, FLORIDA
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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) 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.

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

This **Agreement** is made and entered into this 7th day of NOV, 2023 by and between Timothy L. Porticus, (hereinafter called "**Customer**"), located at 1151 WE 2nd St 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: 1151 WE 2nd St, Ocala, FL 34474

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

Effective: October 1, 2019

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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 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)

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

Effective: October 1, 2019

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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.

(Continued on Sheet No. 21.3)

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

Effective: October 1, 2019

OCALA ELECTRIC UTILITY
OCALA, FLORIDA
(Continued from Sheet No. 21.2)

FIRST REVISED SHEET NO. 21.3
CANCELS ORIGINAL 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'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.

(Continued on Sheet No. 21.4)

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

Effective: October 1, 2019

OCALA ELECTRIC UTILITY
OCALA, FLORIDA
(Continued from Sheet No. 21.3)

FIRST REVISED SHEET NO. 21.4
CANCELS ORIGINAL 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)

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

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: DocuSigned by:
Janice Mitchell
5519864386844E1...

By: Timothy Pontious
(Print Name)

Title: CFO

Timothy Pontious
(Signature)

Date: 11/17/2023

Date: 11/17/2023

City of Ocala Electric Utility Account Number:

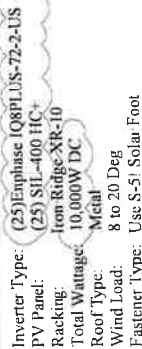
843604-1894188

Approved as to form and legality:

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

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

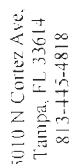
Effective: October 1, 2019



S-1 Cover Sheet / Site Plan
S-2 Detail
E-1 One - Line
E-2 Electrical Code
S-1A Mounting Plan

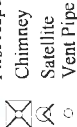
General Notes:

- Enphase IQ8PL-US-72-2-US Micro Inverters are located on roof behind each module.
- First responder access maintained and from adjacent roof.
- Wire run from array to connection is 40 feet



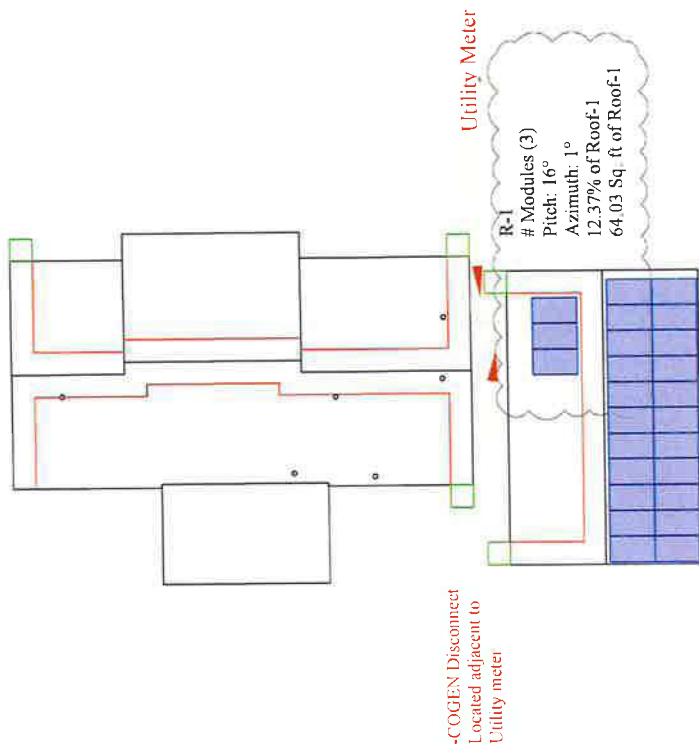
Ground Access

11-6" First responder access.



Utility Meter
PV Disconnect

Meets the requirements of the following- (2020 FL Residential Code & FBC, 7th Edition (2020 International Residential Code) - 2nd Printing modified by the FL Building Standards, 2020 Florida Building Energy Conservation Code 7th edition, County of Marion Code, 2017 National Electric Code.)



R-2
Modules (22)
Pitch: 16°
Azimuth: 181°
89.41% of Roof-2
469.56 Sq. ft of Roof-2

System meets the requirements of NFPA 70th Edition, Chapter 11.12 (2018 Edition)

Meets All Editions of Florida Fire Prevention Code 2020 7th Edition
Meets all requirements of 2018 Editions of NFPA-1 and NFPA-101

3rd Access Pathway

1st Responder Access

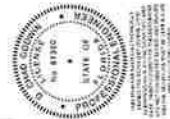
Represents all Fire Clearance including Alternative methods

minimum of 36" unobstructed as per Section R324 of the 2020 IRC

Customer Info:

TIMOTHY LEE PONTIOUS
4134 NE 22ND AVE
OCALA, FL
34479

Layout Subject to Change Based on Site Conditions



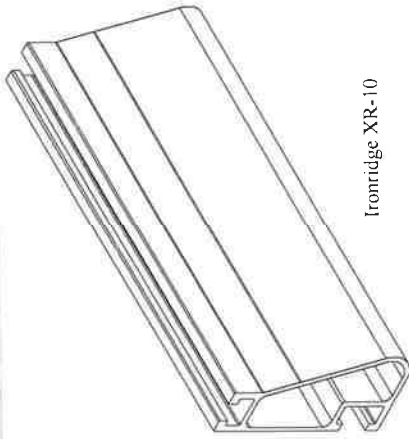
**Godwin Engineering and
Design, LLC**
83378 Foxtail Loop
Pensacola, FL 32526
D. Chad Godwin, PE
Chad@godwineng.com

Digitally signed by
Donnie C
Godwin
Date: 2023.10.23
08:18:24
-05'00'

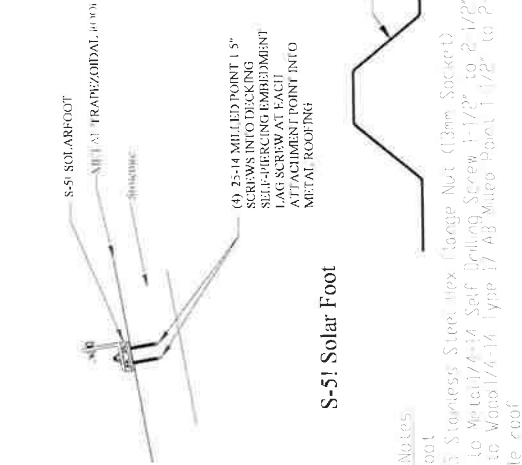


Compass for Aerial

Date:	6/1/2023
Drawn by:	GK
Revised by:	SK
Rev #:	01
Rev Date:	10/20/2023
Page:	11"x17" S-



Ironridge XR-10



S-5! Solar Foot

- General Notes
- 1. Solar Foot
 - 2. X8-125 Stainless Steel Hex Flange Nut (3mm Socket)
 - 3. Metal to Metal/4x4 Self-Drilling Screw 1-1/2" to 2-1/2" Metal to Metal/4-14 Type 17 Mg Milled Point 1-1/2" to 2-1/2"
 - 4. Example roof

R1-R2									
Roof Type:	Metal								
Roof Pitch & Overhang:	3/12, 12" Overhang								
Mount Type:	S-5! Solar Foot								
Fastener:	(4) 25-14 Milled Point 2.5" Screws; (2) into Purlins, (2) into Roofing								
Structure:	Horizontal Metal Purlins @ 40" O.C.								
Sealing/Flashing:	All penetrations are sealed and flashed								
Extra Notes:									

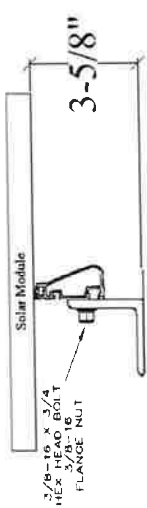
Purlins Spans	Zone 1	Zone 2e	Zone 2n	Zone 2r	Zone 3e	Zone 3r
Exposed	40"	40"	40"	40"	40"	40"
Non-Exposed	40"	40"	40"	40"	40"	40"

-Roof Height 15'
-Per 2020 FBC, the Roof Mounted PV System will be subject to the following design criteria:
Design Wind Speed(Vult) - 130mph 3 sec gust,
Exposure Category - C
-Designed as per ASCE7-16

Inverter Type: (25)Emphase 108PLUS-72-2-US
PV Panel: (25) SIL-400 HC+
Racking: Iron-Ridge XR-10
Total Wattage: 10,000W DC
Roof Type: Metal
Wind Load: 8 to 20 Deg
Fastener Type: Use S-5! Solar Foot

Customer Info:

TIMOTHY LEE PONTIOUS
4134 NE 22ND AVE
OCALA, FL 34479



Install will be done to Manufacturer Spec

Godwin Engineering and Design, LLC
8378 Foxtail Loop
Pensacola, FL 32526
D. Chad Godwin, PE
Chad@godwineng.com

Digitally signed by Donnie C Godwin
Date: 2023.10.2 3 08:18:43 -05'00'

5010 N Cortez Ave.
Tampa, FL 33614
813-445-4818

Date:	6/1/2023
Drawn by:	GKS
Revised by:	SK
Rev #:	01
Rev Date:	10/20/2023
Page:	11"X17" S-2

USED LABEL NOTES:
1. THE VARIOUS SIGNS, OR LABEL(S) SHALL COMPLY WITH THE 110.21(1) REQUIREMENTS OF THE ELECTRICAL CODE.
2. LABELS SHALL BE INSTALLED AT THE POINT OF DISCONNECT.
3. LABELS TO BE A MINIMUM HEIGHT OF 3" AND PERMANENTLY AFFIXED.
4. LABELS SHALL ALSO CARRY WITH THE SPECIFIC REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.

Disconnect is in compliance 230.72
Supply side disconnect adjacent to Main
Line Side Tap will be done in Main Service Panel Located Inside Garage

Refer to NEC 110.21(1) for
Labeling requirements
and for current devices
Exclusions:
If the conditions are met
the label is not required
and no revision completed



Godwin Engineering and
Design, LLC
8378 Foxtail Loop
Pensacola, FL 32526
D. Chad Godwin, PE
Chad@godwineng.com

Digitally signed by
Donnie C Godwin
Date: 2023.10.23
08:18:52 -05'00'



5010 N Cortez Ave.
Tampa, FL 33614
813-415-1818

Inverter Type:
Enphase IQ8PLUS-72-2-US
PV Panel:
(25)
SIL-400 HC+
Total Wattage
10,000W DC

Date: 6/1/2023
Drawn by: GKS
Revised by: SK
Rev #: 01
Rev Date: 10/20/2023
Page: 11"x17" E-I

Photovoltaics:
(25) SIL-400 HC+
Inverters:
(25) Enphase IQ8PLUS-72-2-US Micro Inverters
Circuits:
(1) circuit of (13) Modules
(1) circuit of (12) Modules
Maximum Inverters Per 20A Circuit (13)

Enphase IQ Trunk Cable
Q-12-240
#12AWG THHN-THWN-2
UL 9703

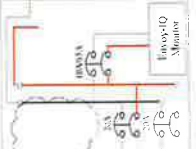
Grounding Conductor to be protected
#8 Awg or to be unprotected #6 Awg
250.64(B) 250.66 & 250.120(C)

Roof

NEMA 3R
Junction Box
Black - L1
Red - L2
Green - Ground



Enphase Combiner Box
BX-1Q-AM1-240



60A Service-Bond
Panel Grounding
AC Disconnect
100A Fuse

Low-voltage Adjuster w/ Blank Meter

#6 Ground GEC



Conduit (in)	11/12 N (Awg)	Ground (Awg)	OCPD
0.75	8	8	40
0.75	6	N/A	40
After Combiner	B	C	
To Line Side Tap			

Customer Info:

TIMOTHY LEE PONTIOUS
4134 NE 22ND AVE
OCALA, FL
34479

- GEC NOTES:
- Ungrounded system per 600.41(A)(4)
 - GEC must be installed per 250.14
 - GEC must be grounded or connected to the ground system or connected to the ground system
 - GEC must be grounded or connected to the ground system
 - GEC must be grounded or connected to the ground system
 - GEC must be grounded or connected to the ground system
 - Disconnects will be Visible, lockable, adjacent to and within 10' of utility meter
 - All Labels & Markings for photovoltaic system will be reflective and meet all requirements for NFPA 70E 12.12

Note:
-All wiring to meet the 2017 NEC and Florida electric codes,
60A Disconnect
-Type of conduit to be determined on site by contractor.
Install will be done to Manufacturer Spec

In Case of Emergency Call
And Services
at 813-445-4818
Ed Berry EC13001480

Enphase Output Ckt Per String

AC Max Output Current	15.73
AC Max Output Current * 125%	19.7
Overcurrent Protection (A)	20
No. of Current Carrying Cond	<4
Conductor Gauge (AWG)	10
Enphase Total Output Ckt	
AC Max Output Current	30.25
AC Max Output Current * 125%	37.8
Overcurrent Protection (A)	40
No. of Current Carrying Cond	<4
Conductor Gauge (AWG)	8

Including the label below

Meets 11.12.2.1.5

System meets the grounding requirements of NEC 690.43

The Placard shall be permanently marked and shall be made of red, weather proof, hard plastic, with engraved white block lettering.

Rapid Shutdown Built in Per Code NEC 690.12

pv AC disconnect is lockable in the open position per code NEC 705.22(7)

Everything will be built to Code without all specifics labelled on plan

System is in compliance with NFPA 70E 11.12 7th Edition.

Markings shall be placed on all DC Conducts, DC Combiners, Raceways, Enclosures Junction Boxes, and Cable Assemblies at every 10' turns, and above and below penetrations in compliance with NFPA

Smoke Alarms per I.S. 553.883

Disconnect means shall be provided for all disconnecting all ungrounded conductors that supply or pass through the building or structure Per Code 2017 NEC Section 225.31 & Section 225.32

E04. Construction documents specify PV system circuits installed on or in buildings include a rapid shutdown function that controls specific conductors in accordance with NEC article 690.12.

E05. These construction documents specify that a label is provided with the method to initiate rapid shut down per 690.12(4).

E06. Construction drawings specify buildings or structures with both utility service and a PV system, complying with NEC article 690.12 shall have a permanent plaque or directory including the following wording "PHOTO VOLTATIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN" as per NEC article 690.56 (C).

E07. Construction documents specify PV power circuit labels shall appear on every section of the wiring system that is separated by enclosures, walls, partitions, ceilings or floors.

E08. Construction documents specify all warning sign(s) or label(s) shall comply with NEC article 110.21 (B). Label warnings shall adequately warn of the hazard. Labels shall be permanently affixed to the equipment. Labels required shall be suitable for the environment.

Inverter Rated CM		To Disconnect Protection Device with Copper	
Design Temperature (T)	87°F	87°F	310 1500(24)
Temp Rating of Conductors (C)	75°C	75°C	310 1500(14)
AC Max Output Current	600 A	600 A	600 800
AC Max Output Current * 1.25%	750 A	750 A	750 800
Overcurrent Protection(A)	40A	40A	310 1500(24)
Amperage Correction Factor	0.94	0.94	310 1500(14)
Maximum Fill Adjustment Factor	1.00%	1.00%	310 1500(14)
Wire Size(Inch)	8	8	310 1500(14)
Cord Allowable Ampacity(A)	50A	50A	50A * 0.94 = 47A
Cord Adjusted Ampacity(A)	47A	47A	47A
Ampacity Chart 1 Per 690.8(B)(1)	Pass	Pass	Pass
Ampacity Chart 2 Per 690.8(B)(2)	Pass	Pass	Pass

All Exterior equipment is A minimum of Nema-R3 Rated

All Interactive System(S) Points of interconnection with other sources shall be marked at an accessible location at the disconnecting means as a power source and with the rated ac output current and the nominal operating AC voltage. Per NEC 690.54

Over Current Protection Device is "Next size up" Based on Inverter Maximum Continuous Output Current Rating 2017 NEC 240.4(B)

-All new equipment located adjacent to Meter on exterior wall

Labels will be placed in the correct location Per Code NEC 690.56(B), 690.56(C), & 690.53

Include required label for metallic raceways and conduits to sheet E-1 per NEC article 690.31(G)(3).

Add required label to sheet E-1 per NEC article 705.10.

Include required label to sheet E-1 per NEC article 705.12(B) Photovoltaic AC disconnect shall be capable of being locked in the open position per NEC article 705.22(6).

Photovoltaic AC Overcurrent protection shall be located within 10 feet of the point where conductors are connected to the service per NEC 705.31.

Plans Satisfy NEC 250.94 & NEC 250.53(A)(2)

Apply to Main Disconnect

In Case of Emergency Call
And Services
at 813-445-4818
Ed Berry EC13001480

Permanent sticker added to disconnect

Customer Info:

TIMOTHY LEE PONTIOUS
4134 NE 22ND AVE
OCALA, FL
34479

RAPID SHUTDOWN FOR SOLAR PV SYSTEM

WARNING
THIS SERVICE METER IS ALSO SERVED BY A PHOTOVOLTAIC SYSTEM
705.12(B)(3)

WARNING
POWER SOURCE OUTPUT CONNECTION DO NOT RELOCATE THIS OVERCURRENT DEVICE
705.12(B)(2)(3)(b)

WARNING
PHOTOVOLTAIC POWER SOURCE
NEC 690.31 (G)(3)

EMERGENCY RESPONSE
THIS SOLAR PV SYSTEM IS EQUIPPED WITH RAPID SHUTDOWN
TURN RAPID SHUTDOWN SWITCH TO THE OFF POSITION TO SHUT DOWN THE LINE PV SYSTEM
NFPA 70E 11.12 2.1.1.1 and 11.12 2.1.3

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN
TURN RAPID SHUTDOWN SWITCH TO THE OFF POSITION TO SHUT DOWN PV SYSTEM AND REDUCE BACKFEED INTO THE ARRAY
NFPA 70E 11.12 2.1.1.1 and 11.12 2.1.3

Figure 690.56(C)(1)(a) Label for PV Systems that Shut down the array and the conductors leaving the array

Godwin Engineering and Design, LLC
8378 Foxtail Loop
Pensacola, FL 32526
D. Chad Godwin, PE
Chad@godwineng.com

Digitally signed by
Donnie C Godwin
Date: 2023.10.2 3 08:19:07 -0500'

And
Services
5010 N Codez Ave.
Tampa, FL 33614
813-445-4818

Date: 6/1/2023
Drawn by: GKS
Revised by: SK
Rev #1: 01
Rev Date: 10/20/2023
Page: 11"x17" E-2

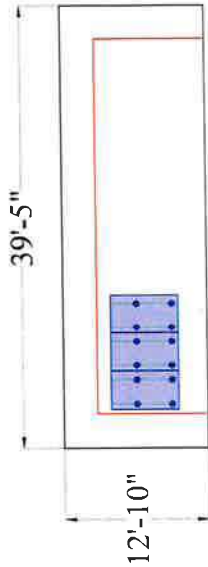
Inverter Type: Emphase IQPPL US-72-2-US
PV Panel: (25)
SIL-400 HC+
Total Wattleage 10,000W DC

Proposed Mounting locations

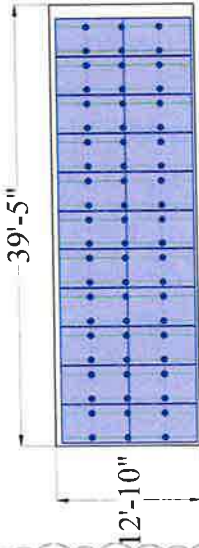
Iron Ridge XR-10 Rail

14' 25

- 78 S-5! Solar Foot
- 78 Iron Ridge UFO's
- 56 Iron Ridge Sleeves/End Caps
- 2 6x6 J-Box
- 14 Iron Ridge Ground Lugs
- 25 SIL-400 HC+
- 25 Enphase IQ8PLUS-72-2-US
- 1 60A Fused Disconnect
- 2 40A Fuses
- 2 20A 2P Breakers
- 1 Enphase Combiner Box



R-1
Modules (3)
Pitch: 16°
Azimuth: 1°
12.37% of Roof-1
64.03 Sq. ft of Roof-1



R-2
Modules (22)
Pitch: 16°
Azimuth: 181°
89.41% of Roof-2
469.56 Sq. ft of Roof-2



Exposed Spacing

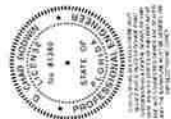


Non-Exposed Spacing

Plans satisfy zones FBC-1510.7.1
Install will be done to Manufacturer Spec

Godwin Engineering and Design, LLC
8378 Foxtail Loop
Pensacola, FL 32526
D. Chad Godwin, PE
Chad@godwineng.com

Digitally signed by
Donnie C Godwin
Date: 2023.10.2 3 08:19:17 -05'00'



5010 N Cortez Ave.
Tampa, FL 33614
813-445-4818

Customer Info:

TIMOTHY LEE PONTIOUS
4134 NE 22ND AVE
OCALA, FL
34479

Inverter Type: (25)Enphase IQ8PLUS-72-2-US
PV Panel: (25) SIL-400 HC+
Racking: Iron Ridge XR-10
Total Wattage: 10,000W DC
Roof Type: Metal
Wind Load: 8 to 20 Deg
Fastener Type: Use S-5! Solar Foot

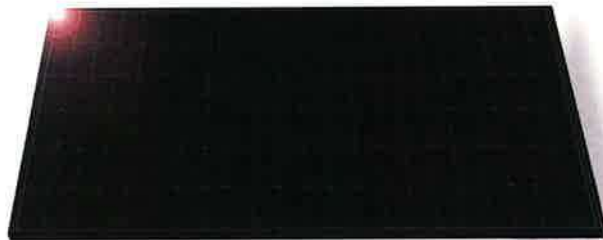
Purlins Spans	Zone 1	Zone 2e	Zone 2n	Zone 2r	Zone 3e
Exposed	40"	40"	40"	40"	40"
Non-Exposed	40"	40"	40"	40"	40"
Max Cantilever	16"	16"	16"	16"	16"

Max Cantilever = Max Span * (1/3)



SILFAB PRIME

SIL-410-HEC



RELIABLE ENERGY.
DIRECT FROM THE SOURCE.

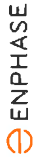
Designed to outperform.

Dependable, durable, high-performance solar panels engineered for North American homeowners.

SILFABSOLAR.COM



ELECTRICAL SPECIFICATIONS			410	410
Test Conditions			STC	NOCT
Module power (P _{max})			410	306
Maximum power voltage (V _{mp})			48.9V	36.24
Maximum power current (I _{mp})			8.37A	8.43
Open circuit voltage (V _{oc})			59.5V	42.20
Short circuit current (I _{sc})			9.11A	8.93
Module efficiency (%)			20.7%	18.3%
Maximum system voltage (V _{oc})			59.5V	42.20
Series fuse rating			20	20
Power tolerance			±0.5%	±0.5%
Temperature coefficient P _{max} (100W/m ² , AM 1.5, Temperature 25 °C) - NOCT test type			-0.45%/°C	-0.45%/°C
Temperature coefficient V _{oc} (100W/m ² , AM 1.5, Temperature 25 °C) - NOCT test type			-0.28%/°C	-0.28%/°C
Temperature coefficient I _{sc} (100W/m ² , AM 1.5, Temperature 25 °C) - NOCT test type			0.06%/°C	0.06%/°C
Temperature coefficient P _{max} (100W/m ² , AM 1.5, Temperature 25 °C) - NOCT test type			-0.45%/°C	-0.45%/°C
Operating temperature			-40/+85 °C	-40/+85 °C
Mechanical Properties / Components				
Module weight			21.3kg (46.9lb)	17.3kg (38.1lb)
Dimensions (H x W x D)			1314 mm x 1036 mm x 35 mm	1314 mm x 1036 mm x 35 mm
Maximum surface load (wind/snow)*			5400 Pa (static load) / 5400 Pa (dynamic load)	5400 Pa (static load) / 5400 Pa (dynamic load)
Anti-impact resistance			#25 mm steel ball	#25 mm steel ball
Cells			132 cells (60 cells in series)	132 cells (60 cells in series)
Glass			3.2 mm high resistance, tempered, anti-reflexive coating	3.2 mm high resistance, tempered, anti-reflexive coating
Cables and connectors (refer to installation manual)			1350 mm, 6.5 mm, MC4 (form S) cable	1350 mm, 6.5 mm, MC4 (form S) cable
Backsheet			High durability, superior hydrolysis and UV resistance, multi-layer dielectric film	High durability, superior hydrolysis and UV resistance, multi-layer dielectric film
Frame			Aluminum (Anodized)	Aluminum (Anodized)
Bypass diodes			3 diodes (per module)	3 diodes (per module)
Junction box			IP67, 1000V, 1000W, 1000V, 1000V, 1000V, 1000W	IP67, 1000V, 1000W, 1000V, 1000W, 1000V, 1000W
Warranties				
Temperature ratings				
Temperature coefficient P _{max}			-0.45%/°C	-0.45%/°C
Temperature coefficient V _{oc}			-0.28%/°C	-0.28%/°C
Temperature coefficient I _{sc}			0.06%/°C	0.06%/°C
Temperature coefficient P _{max}			-0.45%/°C	-0.45%/°C
Operating temperature			-40/+85 °C	-40/+85 °C
Certifications				
UL 6171, UL 6172, UL 6173, UL 6174, UL 6175, UL 6176, UL 6177, UL 6178, UL 6179, UL 6180, UL 6181, UL 6182, UL 6183, UL 6184, UL 6185, UL 6186, UL 6187, UL 6188, UL 6189, UL 6190, UL 6191, UL 6192, UL 6193, UL 6194, UL 6195, UL 6196, UL 6197, UL 6198, UL 6199, UL 6200, UL 6201, UL 6202, UL 6203, UL 6204, UL 6205, UL 6206, UL 6207, UL 6208, UL 6209, UL 6210, UL 6211, UL 6212, UL 6213, UL 6214, UL 6215, UL 6216, UL 6217, UL 6218, UL 6219, UL 6220, UL 6221, UL 6222, UL 6223, UL 6224, UL 6225, UL 6226, UL 6227, UL 6228, UL 6229, UL 6230, UL 6231, UL 6232, UL 6233, UL 6234, UL 6235, UL 6236, UL 6237, UL 6238, UL 6239, UL 6240, UL 6241, UL 6242, UL 6243, UL 6244, UL 6245, UL 6246, UL 6247, UL 6248, UL 6249, UL 6250, UL 6251, UL 6252, UL 6253, UL 6254, UL 6255, UL 6256, UL 6257, UL 6258, UL 6259, UL 6260, UL 6261, UL 6262, UL 6263, UL 6264, UL 6265, UL 6266, UL 6267, UL 6268, UL 6269, UL 6270, UL 6271, UL 6272, UL 6273, UL 6274, UL 6275, UL 6276, UL 6277, UL 6278, UL 6279, UL 6280, UL 6281, 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IQ8 and IQ8+ Microinverters

Our newest IQ8 Microconverters are the industry's first microgrid-forming, software-defined microconverters with split-phase power conversion capability to convert DC to AC power efficiently. The brain of the semiconductor-based microconverter is our proprietary application-specific integrated circuit (ASIC) which enables the microconverter 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.



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



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



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

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10RSP-DS-0002-01-EN-US-2021-10-19

IQ8 and IQ8+ Microinverters

101101672-01		101101672-01E	
101101672-01		101101672-01E	
Commonly used module ratings*	235 – 350	235 – 440	
Module compatibility	60-cell/120 half-cell	60-cell/120 half-cell and 72-cell/144 half-cell	
MPP1 voltage range	27 – 37	29 – 45	
Operating range	25 – 48	25 – 58	
Min/max start voltage	30 / 48	30 / 58	
Max input DC voltage	50	60	
Max DC current† [module I _{sc}]	15		
Overvoltage class DC port	II		
DC port backfeed current	0		
PV array configuration	1x Ungrounded array; No additional DC side protection required; AC side protection requires max 20A per branch circuit		
101101672-01E		101101672-01E	
Peak output power	245	300	
Max continuous output power	240	280	
Nominal (L–L) voltage/range*	240 / 211–264		
Max continuous output current	10	1.2†	
Nominal frequency	60		
Extended frequency range	50 – 68		
Max units per 20 A (L–L) branch circuit*	19	13	
Total harmonic distortion	<5%		
Overvoltage class AC port	III		
AC port backfeed current	30		
Power factor setting	1.0		
Sold-used 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		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	MCA		
Dimensions (HxWxD)	212mm (8.3") x 175mm (6.9") x 30.2mm (1.2")		
Weight	1.08 kg (2.38 lbs)		
Cooling	Natural convection – no fans		
Approved for wet locations	Yes		
Acoustic noise at 1m	<60 dBA		
Pollution degree	PDS		
Enclosure	Class II double-insulated; corrosion resistant; polymeric enclosure		
Emitted category / UV exposure rating	NEMA Type 6 / outdoor		
COMPLIANCE		COMPLIANCE	

(0) No enforced DC/MC ratio. See the compatibility calculator at <https://link.elsevier.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 specifications to define the number of microconverters per branch in your area.

ICASP-DS-0002-01-EN-US-2021-10-19



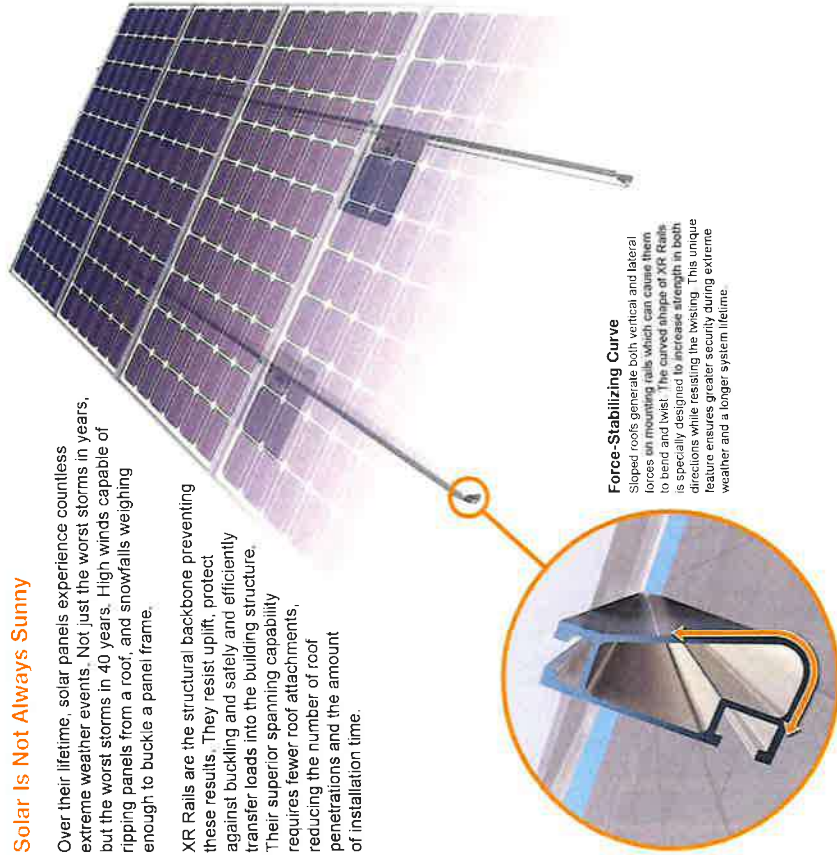
XR Rail Family

Tech Brief

Solar Is Not Always Sunny

Over their lifetime, solar panels experience countless extreme weather events. Not just the worst storms in years, but the worst storms in 40 years. High winds capable of ripping panels from a roof, and snowfalls weighing enough to buckle a panel frame.

XR Rails are the structural backbone preventing these results. They resist uplift, protect against buckling and safely and efficiently transfer loads into the building structure. Their superior spanning capability requires fewer roof attachments, reducing the number of roof penetrations and the amount of installation time.



Force-Stabilizing Curve

Sloped roofs generate both vertical and lateral forces on mounting rails which can cause them to bend and twist. The curved shape of XR Rails is specially designed to increase strength in both directions while resisting the twisting. This unique feature ensures greater security during extreme weather and a longer system lifetime.

Compatible with Flat & Pitched Roofs

XR Rails are compatible with Flashfoot and other pitched roof attachments



Corrosion-Resistant Materials

All XR Rails are made of 6000-series aluminum alloy, then anodized with an anti-corrosion coating. This provides a more attractive appearance.



XR Rail Family

The XR Rail Family offers the strength of a curved rail in three targeted sizes. Each size supports specific design loads, while minimizing material costs. Depending on your location, there is an XR Rail to match.



XR10

XR10 is a sleek, low-profile mounting rail, designed for regions with light or no snow. It achieves spans up to 6 feet, while remaining light and economical.

- 6' spanning capability
- Extreme load capability
- Clear & black anodized finish
- Internal splices available



XR100

XR100 is the ultimate residential mounting rail. It supports a range of wind and snow loads, while also maximizing spans up to 10 feet.

- 10' spanning capability
- Heavy load capability
- Clear & black anodized finish
- Internal splices available



XR1000

XR1000 is a heavyweight among solar mounting rails. It's built to handle extreme climates and spans up to 12 feet for commercial applications.

- 12' spanning capability
- Extreme load capability
- Clear anodized finish
- Internal splices available

Rail Selection

The table below was prepared in compliance with applicable engineering codes and standards. * Values are based on the following criteria: ASCE 7-16, Gable Roof Flush Mount, Roof Zones 1 & 2e, Exposure B, Roof Slope of 8 to 20 degrees and Mean Building Height of 30 ft. Visit IronRidge.com for detailed certification letters.

Load		Rail Span					
		4'	6'-4"	6'	8'	10'	12'
Snow (PSF)	90	XR10	XR100	XR1000			
	120						
	140						
	160						
Wind (MPH)	90	XR10	XR100	XR1000			
	120						
	140						
	160						
None	90	XR10	XR100	XR1000			
	120						
	140						
	160						
20	90	XR10	XR100	XR1000			
	120						
	140						
	160						
30	90	XR10	XR100	XR1000			
	120						
	140						
	160						
40	90	XR10	XR100	XR1000			
	120						
	140						
	160						
80	90	XR10	XR100	XR1000			
	120						
	140						
	160						
120	90	XR10	XR100	XR1000			
	120						
	140						
	160						

Table is meant to be a helpful guide only for convenient general rail capabilities. The allowed span location letter is for actual design practices.

GODWIN ENGINEERING AND DESIGN, LLC

8378 Foxtail Loop, Pensacola, FL 32526 | (850)712-4219 | chad@godwineng.com

October 23, 2023

To: Marion County Building Department
2710 E. Silver Springs Blvd.
Ocala, FL 34470

Subject: Pontious - Residential PV Roof Mount Installation
4134 NE 22nd Ave
Ocala, FL 34479

To whom it may concern,

This letter is regarding the proposed installation of a rooftop-mounted Solar PV system on the existing residential structure at the subject address. I have reviewed the attachment plan and have determined that the rooftop-mounted PV system is in compliance with the applicable sections of the following Codes as amended and adopted by the jurisdiction when installed in accordance with the manufacturer's installation instructions:

2020 Florida Building Code 7th Edition, FBC
ASCE 7 Min. Design Loads for Buildings & Other Structures
Design Criteria: Design Wind Speed(Vult) - 130 mph 3sec gust. Exposure Category - C, Risk Category II

The rooftop-mounted photovoltaic panel system has been designed in accordance with FRC R324.4. When roof penetrations are necessary, they shall be flashed and sealed in accordance with the manufacturer's installation instructions, R905.17.3. The PV system consist of the modules, railing, and connection hardware. Refer to the specific roof type calculation pages for PV dead loads. The portions of the existing structure covered with solar panels will be adequate for supporting the roof loads per R324.4.1.1.

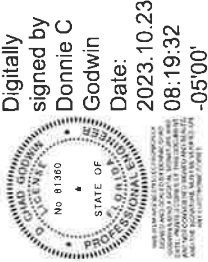
The securement method of the the PV system is to be mounted parallel to the structure with the site specific railing and attachments according to the designed plans. The site specific wind load calculations for the module and their supports are attached with this document. Fasteners shall be installed to the designated roof member with the proper torque from the manufactures installation instructions.

The design wind pressures for rooftop solar panels located on enclosed or partially enclosed buildings of all heights, with panels parallel to the roof surface with a tolerance of 2" and with a max height above the roof surface, h_p , not exceeding 10 in. A min gap of 0.25 in shall be provided between all panels with the spacing of gaps between panels not exceeding 6.7 ft. in addition the array shall be located at least $2h_z$ from the roof edge, a gable ridge, or a hip ridge.

It is the contractors responsibility to review all drawings for accuracy and notify the EOR of any discrepancies prior to beginning construction. To the best of my knowledge, the plans and specifications comply with the minimum requirements of the latest Florida Building code.

Please see attached documents and contact me should you have any questions.

Sincerely,
D. Chad Godwin, PE #1360
Exp. 02/28/2025



THE COMMONWEALTH OF MASSACHUSETTS
OFFICE OF THE ATTORNEY GENERAL
JULY 1, 1997

Digitally signed by Donnie C Godwin
Date: 2023.10.20 08:19:51 -05'00'

FRONT OF HOUSE



Inverter Type: (25) Enphase IQ8PLUS-72-2-US
PV Panel: (25) SIL-400 HC
Racking: Iron Ridge XR-10
Total Wattage: 10,000W DC
Roof Type: Metal
Wind Load: 8 to 20 Deg
Fastener Type: Use S-51 Solar Foot

Sheet Index

S-1	Cover Sheet / Site Plan
S-2	Detail
E-1	One - Line
E-2	Electrical Code
S-1A	Mounting Plan

General Notes:
-Enphase IQ8PLUS-72-2-US Micro Inverters are located on roof behind each module.
-First responder access maintained and from adjacent roof
-Wire run from array to connection is 40 feet.



5010 N Cortez Ave.
Tampa, FL 33614
813-445-4818

Legend

3' 1'-6" First responder access

Ground Access

Utility Meter

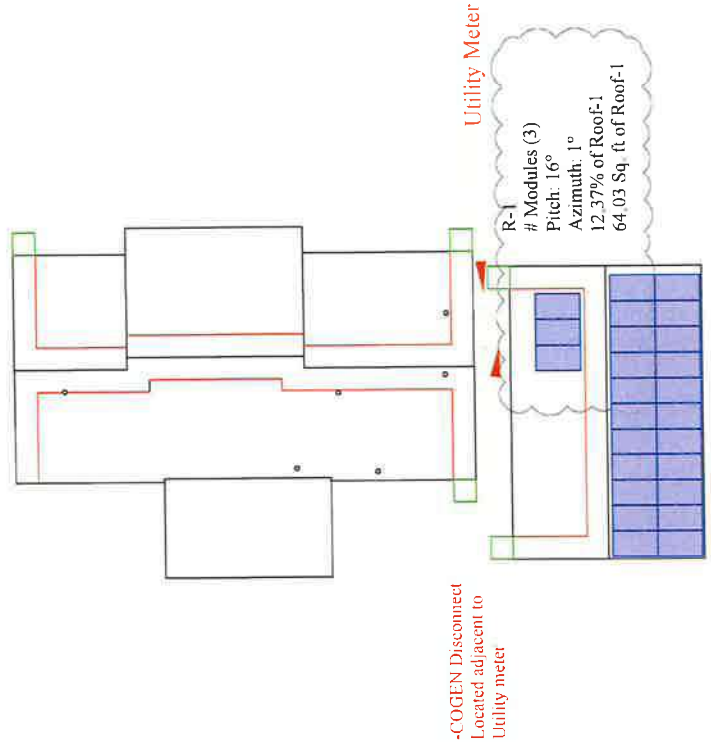
PV Disconnect

Chimney

Satellite

Vent Pipe

Meets the requirements of the following- (2020 FL Residential Code & FBC, 7th Edition (2020 International Residential Code) - 2nd Printing modified by the FL Building Standards, 2020 Florida Building Energy Conservation Code 7th edition, County of Marion Code, 2017 National Electric Code.)



R-2
Modules (22)
Pitch: 16°
Azimuth: 181°
89.41% of Roof-2
469.56 Sq. ft of Roof-2

R-1
Modules (3)
Pitch: 16°
Azimuth: 1°
12.37% of Roof-1
64.03 Sq. ft of Roof-1

-COGEN Disconnected
Located adjacent to
Utility meter

Utility Meter

System meets the requirements of NFPA 70th Edition, Chapter 1-11, 12 (2018 Edition) Install will be done to Manufacturer Spec

Customer Info:

TIMOTHY LEE PONTIOUS
4134 NE 22ND AVE
OCALA, FL
34479

Meets All Editions of Florida Fire Prevention Code 2020 7th Edition
Meets all requirements of 2018 Editions of NFPA-1 and NFPA-101

3' Access Pathway

1st Responder Access
minimum of 36" unobstructed as per
Section R324 of the 2020 IRC

Godwin Engineering and Design, LLC
8378 Foxtail Loop
Pensacola, FL 32526
D. Chad Godwin, PE
Chad@godwineng.com

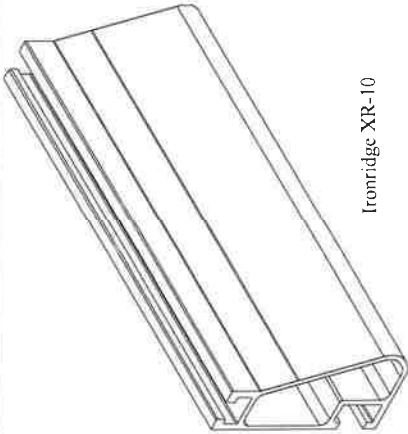
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Donnie C Godwin
Date: 2023.10.23
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-05'00"

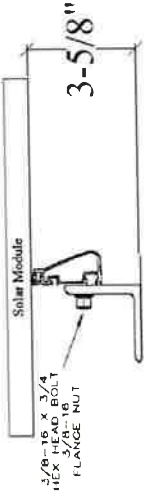
Date: 6/1/2023
Drawn by: GKS
Revised by: SK
Rev #: 01
Rev Date: 10/20/2023
Page: 11"x17" S-1

Compass for Aerial

Layout Subject to Change Based on Site Conditions



Ironridge XR-10



S-5 Solar Foot

- (4) 25-14 MILLED POINT 1 5/8" SCREWS INTO DECKING SELF-PERCING EMBODIMENT LAG SCREW AT EACH ATTACHMENT POINT INTO METAL ROOFING

- General Notes:
1. Solar Foot
2. #8-125 Stainless Steel Hex Flange Nut (13mm Socket)
3. Metal to Metal 1/4-14 Self-Drilling Screw 1-1/2" to 2-1/2"
4. Metal to Wood 1/4-14 Type 17 AG Milled Point 1-1/2" to 2-1/2"

R1-R2

Roof Type:	Metal
Roof Pitch & Overhang:	3/12, 12" Overhang
Mount Type:	S-5 Solar Foot
Fastener:	(4) 25-14 Milled Point 2.5" Screws, (2) into Purlins, (2) into Roofing
Structure:	Horizontal Metal Purlins @ 40" O.C.
Sealing/Flashing:	All penetrations are sealed and flashed
Extra Notes:	

Purlins Spans	Zone 1	Zone 2c	Zone 2n	Zone 2r	Zone 3e	Zone 3r
Exposed	40"	40"	40"	40"	40"	40"
Non-Exposed	40"	40"	40"	40"	40"	40"

-Roof Height 15'
-Per 2020 FBC, the Roof Mounted PV System will be subject to the following design criteria:
Design Wind Speed(Vult) - 130mph 3 sec gust,
Exposure Category - C
-Designed as per ASCE7-16

Inverter Type: (25)Enphase IQ8PLUS-72-2-US
PV Panel: (25) SIL-400 HC+
Racking: Iron Ridge XR-10
Total Wattage: 10,000W DC
Roof Type: Metal
Wind Load: 8 to 20 Deg
Fastener Type: Use S-5 Solar Foot

Customer Info:

TIMOTHY LEE PONTIOUS
4134 NE 22ND AVE
OCALA, FL 34479

Godwin Engineering and Design, LLC
8378 Foxtail Loop
Pensacola, FL 32526
D. Chad Godwin, PE
Chad@godwineng.com

Digitally signed by
Donnie C Godwin
Date: 2023.10.2 3 08:18:43 -0500

And Services
5010 N. Cortez Ave.
Tampa, FL 33614
813-445-4818

Date: 6/1/2023
Drawn by: GKS
Revised by: SK
Rev #: 01
Rev Date: 10/20/2023
Page: 11"X17" S-2

- INCL LABEL NOTES:
- 1. THE WARNING SIGNS OR LABELS SHALL COMPLY WITH NEC 110.21(B)
 - 2. LABELS SHALL BE SIZED FOR THE ENVIRONMENT
 - 3. LABELS SHALL BE SIZED FOR THE ENVIRONMENT
 - 4. LABELS SHALL BE SIZED FOR THE ENVIRONMENT
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 - 9. LABELS SHALL BE SIZED FOR THE ENVIRONMENT
 - 10. LABELS SHALL BE SIZED FOR THE ENVIRONMENT

Photovoltaics:
(25) SIL-400 HC+

Inverters:
(25) Enphase IQ8PLUS-72-2-US Micro Inverters

Circuits:
(1) circuit of (13) Modules
(1) circuit of (12) Modules
Maximum Inverters Per 20A Circuit (13)

Enphase IQ Trunk Cable
Q-12-240
#12 AWG THHN-THWN-2
UL 9703

Grounding Conductor to be protected
#8 AWG or to be unprotected #6 AWG
250.64(B) 250.66 & 250.120(C)

Roof

NEMA 3R
Junction Box
Black - L1
Red - L2
Green - Ground

#10 AWG THWN for Home runs
(1) Line 1
(1) Line 2
Per Circuit
(1) GEC
Inside 2" Feat. 1/4" Conduit (bld on side)

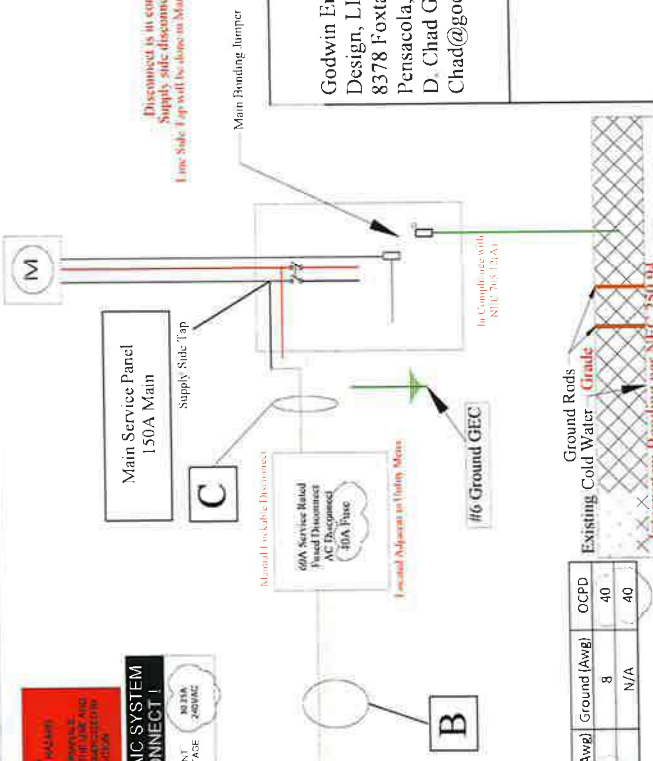
WARNING
ELECTRIC SHOCK HAZARD
DO NOT TOUCH INVERTER
REMAIN ON BOTH THE JAR AND
LOOSE THE INVERTER
FOR 200V DC

PHOTOVOLTAIC SYSTEM
- AC DISCONNECT -
RATED AC OUTPUT CURRENT
NOMINAL OPERATING VOLTAGE

NEMA
3R
JUNCTION BOX

Enphase Combiner Box
#X-IQ-AMU-240

Enphase Output Ckt Per String	
To Overcurrent Protection Device	
AC Max Output Current	15.73
AC Max Output Current * 125%	19.7
Overcurrent Protection (A)	20
No. of Current Carrying Cond	<4
Conductor Gauge (AWG)	10
Enphase Total Output Ckt	
AC Max Output Current	30.25
AC Max Output Current * 125%	37.8
Overcurrent Protection (A)	40
No. of Current Carrying Cond	<4
Conductor Gauge (AWG)	8



Under 30°C 31.2 & 32.2
Under 30°C 31.2 & 32.2
Under 30°C 31.2 & 32.2
Under 30°C 31.2 & 32.2
Under 30°C 31.2 & 32.2
Under 30°C 31.2 & 32.2
Under 30°C 31.2 & 32.2
Under 30°C 31.2 & 32.2
Under 30°C 31.2 & 32.2
Under 30°C 31.2 & 32.2

Disconnected is in compliance 230.22
Supply side disconnect adjacent to Main
Line Side Tap will be done in Main Service Panel Located Inside Garage

Main Bonding Jumper

Manual Test Switch Disconnected

In Compliance with
NEC 705.12(A)

Conduit (in)	LLLN (Avg)	Ground (Avg)	OC PD
0.75	8	8	40
0.75	6	N/A	40

After Combiner
To Line Side Tap

Note:

- All wiring to meet the 2017 NEC and Florida electric codes.
- 60A Disconnect
- Type of conduit to be determined on site by contractor.

Including the label below

In Case of Emergency Call
And Services
at 813-445-4818
Ed Berry EC13001480

Meets 11.12.2.1.5

GEC NOTES

- Ungrounded system per 600.4 (A) (4)
- GEC must be installed per 250.64
- GEC must be continuous (insulated or un-insulated) from the existing service ground system or connected to the existing service ground system
- GEC must be min 68 AWG and installed in conduit
- If GEC is not in conduit, it must be 26 mil
- Disconnects will be Visible, lockable, adjacent to and within 10' of utility meter
- All labels & Markings for photovoltaic system will be reflective and meet all requirements for NFPA 11.11.2

Customer Info:

TIMOTHY LEE PONTIOUS
4134 NE 22ND AVE
OCALA, FL
34479

Godwin Engineering and Design, LLC
8378 Foxtail Loop
Pensacola, FL 32526
D. Chad Godwin, PE
Chad@godwineng.com

Digitally signed by
Donnie C Godwin
Date: 2023.10.23
08:18:52 -0500'



5010 N Cortez Ave.
Tampa, FL 33604
813-445-4818

Date:	6/1/2023
Drawn by:	GKS
Revised by:	SK
Rev #:	01
Rev Date:	10/20/2023
Page:	11"x17" E-1

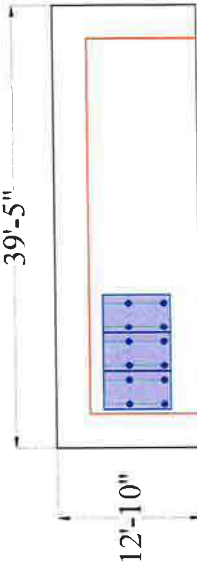
Inverter Type:
Enphase IQ8PLUS-72-2-US
PV Panel:
(25)
SIL-400 HC+
Total Wattage
10,000W DC

Proposed Mounting locations

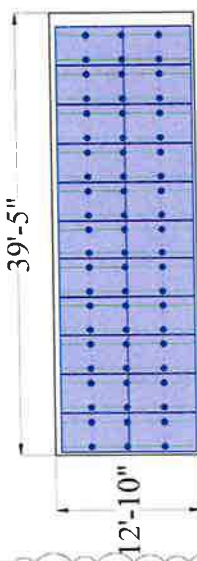
Iron Ridge XR-10 Rail

14' 25

- 78 S-5! Solar Foot
- 78 Iron Ridge UFO's
- 56 Iron Ridge Sleeves/End Caps
- 2 6x6 J-Box
- 14 Iron Ridge Ground Lugs
- 25 SIL-400 HC+
- 25 Enphase IQ8PLUS-72-2-US
- 1 60A Fused Disconnect
- 2 40A Fuses
- 2 20A 2P Breakers
- 1 Enphase Combiner Box



R-1
Modules (3)
Pitch: 16°
Azimuth: 1°
12.37% of Roof-1
64.03 Sq. ft of Roof-1



R-2
Modules (22)
Pitch: 16°
Azimuth: 181°
89.41% of Roof-2
469.56 Sq. ft of Roof-2



Plans satisfy zones FBC-1510.7.1
Install will be done to Manufacturer Spec

Godwin Engineering and Design, LLC
8378 Foxtail Loop
Pensacola, FL 32526
D. Chad Godwin, PE
Chad@godwineng.com

Digitally signed by Donnie C Godwin
Date: 2023.10.2 3 08:19:17 -05'00'

5010 N Cortez Ave.
Tampa, FL 33614
813-445-4818

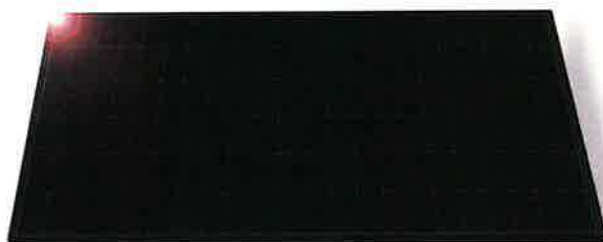
Date: 6/1/2023
Drawn by: GKS
Revised by: SK
Rev #: 01
Rev Date: 10/20/2023
Page: 11"x17" S-1A

Customer Info:
TIMOTHY LEE PONTIOUS
4134 NE 22ND AVE
OCALA, FL
34479

Inverter Type: (25)Enphase IQ8PLUS-72-2-US
pV Panel: (25) SIL-400 HC+
Racking: Iron Ridge XR-10
Total Wattage: 10,000W DC
Roof Type: Metal
Wind Load: 8 to 20 Deg
Fastener Type: Use S-5! Solar Foot

Purlins Spans	Zone 1	Zone 2e	Zone 2h	Zone 2r	Zone 3e
Exposed	40"	40"	40"	40"	40"
Non-Exposed	40"	40"	40"	40"	40"
Max Cantilever	16"	16"	16"	16"	16"

Max Cantilever = Max Span * (i)

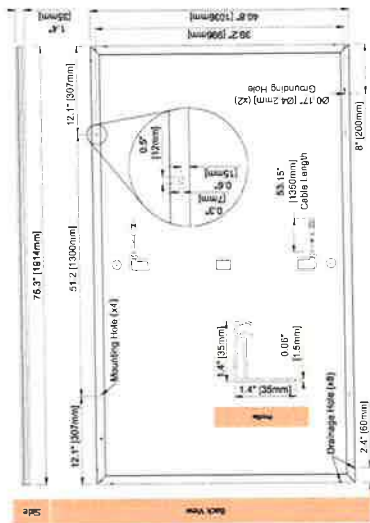


• RELIABLE ENERGY.
DIRECT FROM THE SOURCE.

Designed to outperform.

Dependable, durable, high-performance solar panels engineered for North American homeowners.

SILFABSOLAR.COM

[illegible]

SILFAB SOLAR INC.

350 Cornwall Ave

Bellingham WA 98225 USA
T +1 360 569 4733

info@sillabsolar.com

1770 Dog Drive
Mojave, CA 93543

Burlington WA 98233 USA

7 01360 569 4733

240 Courtney Park Drive East
Mississauga ON L5T 2Y3 Canada

T 1 905 255 2501
F 1 905 595 0267

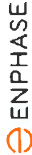
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Lafayette Square Inc.

DATA SHEET



IQ8 and IQ8+ Microinverters

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



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



Connect PV modules quickly and easily to IQ8 Series Microinverters using the included O-CC-2 adapter cable with plug-in PV4 connectors.



IQ8 Series Microinverter reliability
standards with more than one million cumulative hours of power output testing, and a 25-year limited warranty of up to 25 years.



UL Certified
IQ8 Series Microinverters are UL Listed as part of the Enphase Energy System and conform with various regulations, when installed according to manufacturer's instructions.

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IQ8SP-DS-0002-01-EN-US-2021-10-18

IQ8 and IQ8+ Microinverters

INPUT DATA (DC)		104-152-2-UL	104-152-2-UL	104-152-2-UL
Commonly used module pairings ¹	W	235 – 350	235 – 440	235 – 440
Module compatibility		60-cell/120-half-cell	60-cell/120-half-cell and 72-cell/74.4-half-cell	60-cell/120-half-cell and 72-cell/74.4-half-cell
MPP1 voltage range	V	27 – 37	29 – 45	29 – 45
Operating range	V	25 – 48	25 – 58	25 – 58
Min./max start voltage	V	30 / 48	30 / 58	30 / 58
Max input DC voltage	V	50	50	50
Max DC current ² (module I _{sc})	A		15	15
Over-voltage class DC port				
DC port backfeed current	mA		0	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)		104-152-2-UL	104-152-2-UL	104-152-2-UL
Peak output power	VA	245	300	300
Max. continuous output power	VA	240	280	280
Nominal (L-L) voltage/range ³	V		240 / 211 – 264	240 / 211 – 264
Max continuous output current ⁴	A	1.0		1.21
Nominal frequency	Hz		60	60
Extended frequency range	Hz		50 – 68	50 – 68
Max units per 20 A (L-L) branch circuit ⁴		16		19
Total harmonic distortion				
Overvoltage class AC port				
AC port backfeed current	mA		30	30
Power factor setting			1.0	1.0
Grid-tied power factor (adjustable)			0.85 leading – 0.85 lagging	0.85 leading – 0.85 lagging
Peak efficiency	%	97.5		97.6
CEC weighted efficiency	%	97		97
Night-time power consumption	mW		60	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		
Acoustic noise at 1m		<60 dBA		
Pollution degree		P03		
Enclosure		Class II double-insulated, corrosion resistant polymeric enclosure		
Environ. category / UV exposure rating		NEMA Type 6 / outdoor		
CERTIFICATIONS				
Certifications		CA Rule 21 (UL 1741-SA), UL 62109-1, UL 1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 1071-01		

This product is UL Listed as PV Rapid Shut Down Equipment and conforms with NEC 2014, NEC 2017, and NEC 2020 section 690.12 and C22.2-18 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according to manufacturer's instructions.

(3) No enclosed DC/AC ratio. See the compatibility calculator at <https://link.enphase.com/> for module compatibility. (2) Maximum continuous input DC current is 16 A. (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.

104-152-2-UL

104-152-2-UL

104-152-2-UL

(1) No enforced DC/AC ratio. See the compatibility calculator at <https://enphase.com/module-compatibility> (2) Maximum continuous input DC current for the module. (3) Nominal voltage range can be extended beyond nominal range for up to 10% of the total number of modules. (4) Local requirements to define the number of microinverters per branch in your area.

10 Combiner 4/4C

MODE NUMBER	
IQ Combiner: 4	
XI-Q-AMT-240-4	
XI-Q-AMT-240-4 (IEEE 1547:2018)	
IQ Combiner 4C	
XI-Q-AMT-240-4C	
XI-Q-AMT-240-4C (IEEE 1547:2018)	
XI-Q-AMT-240-4C (IEEE 1547:2018)	
ACCESSORIES AND REPLACEMENT PARTS	
<i>(not included, order separately)</i>	
Supported microconverters	
Communications Kit	
COMAS-CELL-MODEM-M1 06	
CELL-MODEM-M1 06-SP 05	
CELL-MODEM-M1-06 AT-05	
Circuit Breakers	
BRK-10A-2-240V	
BRK-15A-2-240V	
BRK-20A-2P-240V	
BRK-20A-2P-240V-B	
BRK-20A-2P-240V-B	
XI-SOL-ASHIELD-ES	
XAFUG-12U-3	
XI-UG-WA-HD-12SA	
Consumption monitoring CMT	
XICT200-1200-SP-1 (ICT200-1200-SP-1)	

IO Combiner 4/4C

The **IQ Combiner 4/4C** with IQ Gateway and integrated LTE-M1 cell modem (included only with IQ Combiner 4C) consolidates interconnection equipment into a single enclosure. It streamlines IQ Microinverters and storage installations by providing a consistent, pre-wired solution for residential applications. It offers up to four 2-wire input circuits and features RS series busbar assembly.

Smart

- Includes IQ Gateway for communication and control
- Includes Mobile Connect cellular modem (CELLMODEM M1-06 SP-05), included only with IQ Combiner 4C
- Includes solar shield to match Enphase IQ Battery aesthetics and deflect heat.
- Supports Wi-Fi, Ethernet, or cellular connectivity
- Optional AC receptacle available for PLC bridge
- Provides production metering and consumption monitoring

Simple

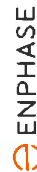
- Mounts on single stud with centered brackets
- Supports bottom, back and side conduit entry
- Allows up to four 2 pole branch circuits for 240VAC plug-in breakers (not included)
- 80A total PV or storage branch circuits

Reliable

- Durable NRH-certified NE-MA type SB enclosure
- Five-year limited warranty
- Two years labor reimbursement program coverage included for both the IQ CombiMer SKU's
- UL listed
- X2-IQ-AM1-240-4 and X2-IQ-AM1-240-4C comply with: IEEE 1547.2018 (UL 1741-SB, 3rd Ed)



To learn more about Enphase offerings, visit enphase.com
 1-844-461-5500 EN-US-12-29-2022

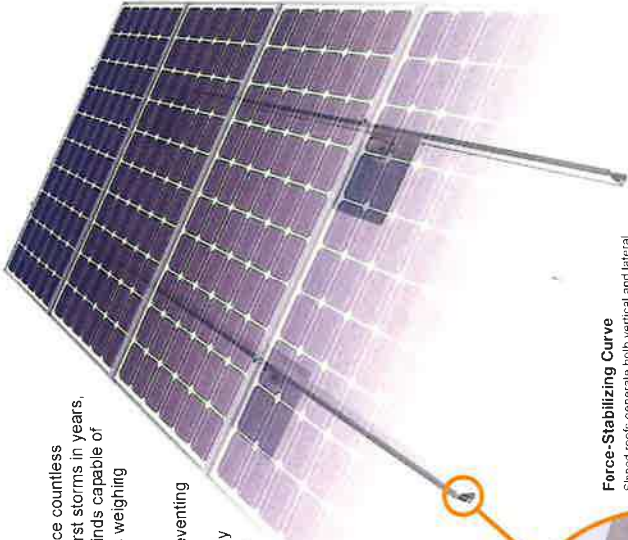


Compliance Gateway

Solar Is Not Always Sunny

Over their lifetime, solar panels experience countless extreme weather events. Not just the worst storms in years, but the worst storms in 40 years. High winds capable of ripping panels from a roof, and snowfalls weighing enough to buckle a panel frame.

XR Rails are the structural backbone preventing these results. They resist uplift, protect against buckling and safely and efficiently transfer loads into the building structure. Their superior spanning capability requires fewer roof attachments, reducing the number of roof penetrations and the amount of installation time.



Force-Stabilizing Curve

Slanted roofs generate both vertical and lateral forces on mounting rails, which can cause them to bend and twist. The curved shape of XR Rails is specially designed to increase strength in both directions while resisting the twisting. This unique feature ensures greater security during extreme weather and a longer system lifetime.

**Compatible with Flat & Pitched Roofs**

XR Rails are compatible with FlatFoot and other pitched roof attachments



IronRidge offers a range of fitting options for flat roof mounting applications

**Corrosion-Resistant Materials**

All XR Rails are made of 6000-series aluminum alloy, then protected with an anodized finish. Anodizing prevents surface and structural corrosion, while also providing a more attractive appearance.

XR Rail Family

The XR Rail Family offers the strength of a curved rail in three targeted sizes. Each size supports specific design loads, while minimizing material costs. Depending on your location, there is an XR Rail to match.



XR10

XR10 is a sleek, low-profile mounting rail, designed for regions with light or no snow. It achieves spans up to 6 feet, while remaining light and economical.

- 6' spanning capability
- Moderate load capacity
- Clear & black anodized finish
- Internal splices available



XR100

XR100 is the ultimate residential mounting rail. It supports a range of wind and snow conditions, while also maximizing spans up to 10 feet.

- 10' spanning capability
- Heavy load capacity
- Clear & black anodized finish
- Internal splices available



XR1000

XR1000 is a heavyweight among solar mounting rails. It's built to handle extreme climates and spans up to 12 feet for commercial applications.

- 12' spanning capability
- Extreme load capacity
- Clear anodized finish
- Internal splices available

Rail Selection

The table below was prepared in compliance with applicable engineering codes and standards. * Values are based on the following criteria: ASCE 7-16, Gable Roof Flush Mount, Roof Zones 1 & 2e, Exposure B, Roof Slope of 8 to 20 degrees and Mean Building Height of 30 ft. Visit IronRidge.com for detailed certification letters.

Load		Rail Span					
		4'	5' 4"	6'	8'	10'	12'
Snow (PSF)	90	XR10					
	120						
	140						
	160						
Wind (MPH)	90	XR100					
	120						
	140						
	160						
20	90	XR1000					
	120						
	140						
	160						
30	90	XR1000					
	120						
	140						
	160						
40	90	XR1000					
	120						
	140						
	160						
80	90	XR1000					
	120						
	140						
	160						
120	90	XR1000					
	120						
	140						
	160						

*Table is meant to be a simplified span chart for comparing general rail capabilities. Use certified certification letters for actual design guidance.

GODWIN ENGINEERING AND DESIGN, LLC

8378 Foxtail Loop, Pensacola, FL 32526 | (850)712-4219 | chad@godwineng.com

October 23, 2023

To: Marion County Building Department
2710 E. Silver Springs Blvd.
Ocala, FL 34470

Subject: Pontious - Residential PV Roof Mount Installation
4134 NE 22nd Ave
Ocala, FL 34479

To whom it may concern,

This letter is regarding the proposed installation of a rooftop-mounted Solar PV system on the existing residential structure at the subject address. I have reviewed the attachment plan and have determined that the rooftop-mounted PV system is in compliance with the applicable sections of the following Codes as amended and adopted by the jurisdiction when installed in accordance with the manufacturer's installation instructions:

- 2020 Florida Building Code 7th Edition, FBC
- ASCE 7 Min. Design Loads for Buildings & Other Structures
- Design Criteria: Design Wind Speed(Vult) - 130 mph 3sec gust, Exposure Category - C, Risk Category II

The rooftop-mounted photovoltaic panel system has been designed in accordance with FRC R324.4. When roof penetrations are necessary, they shall be flashed and sealed in accordance with the manufacture's installation instructions, R905.17.3. The PV system consist of the modules, railing, and connection hardware. Refer to the specific roof type calculation pages for PV dead loads. The portions of the existing structure covered with solar panels will be adequate for supporting the roof loads per R324.4.1.1.

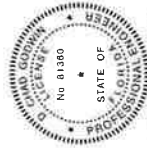
The securement method of the the PV system is to be mounted parallel to the structure with the site specific railing and attachments according to the designed plans. The site specific wind load calculations for the module and their supports are attached with this document. Fasteners shall be installed to the designated roof member with the proper torque from the manufactures installation instructions.

The design wind pressures for rooftop solar panels located on enclosed or partially enclosed buildings of all heights, with panels parallel to the roof surface with a tolerance of 2" and with a max height above the roof surface, h₂, not exceeding 10 in. A min gap of 0.25 in shall be provided between all panels with the spacing of gaps between panels not exceeding 6.7 ft. in addition the array shall be located at least 2h₂ from the roof edge, a gable ridge, or a hip ridge.

It is the contractors responsibility to review all drawings for accuracy and notify the EOR of any discrepancies prior to beginning construction. To the best of my knowledge, the plans and specifications comply with the minimum requirements of the latest Florida Building code.

Please see attached documents and contact me should you have any questions.

Sincerely,
D. Chad Godwin, PE 81360
Exp. 02/28/2025



Digitally signed by

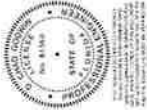
Donnie C Godwin

Date: 2023.10.23 08:19:32 -05'00'

GODWIN ENGINEERING AND DESIGN, LLC

8378 Foxtail Loop, Pensacola, FL 32526 | (850)712-4219 | claud@godwineng.com

Roof Structure Details		Parlours - Residential Calculations Sheet - R1-R2									
Roof Angle	8° to 20°	The securement method of the PV system is to be mounted parallel to the Metal roof with the R-10 raling and S-51 SolarFoot. Purlin 2x4 flashings/attachments. The mounts should be staggered, where possible, to allow distribution of the design loads evenly to the structure. The mounts shall be installed with (2) 1/4" x 1-1/2" ZAC Type AB-MP, Purlin, to Purlin									
Roof Type	Gable										
Roof Covering	Metal										
Mean Roof Height	15 ft										
Purlin Spacing	40 in O.C.										
Rafter/Truss Size	2 x 4										
Wind Load Parameters											
Wind Speed (ast)	101	mph	FRC R301.2.1.3	Basic Wind Speed (Ust)	130	mph	B.C. or D				
Effective Wind Area	21.34	ft ²	26.20	Exposure Cat	C						
Wind Directionality	K _d		Table 26.6-1	Elevation	<1000	ft					
Topographic Factor	K _z		26.8 or 26.8.2	bldg. least hori. dim (typ.)	360	in					
Ground Elevation Factor	K _z		Table 26.9-1	Roof Height	15.00	ft	Exposed Module Definition Exposed Factor = 1.5 for split loads on panels that are exposed and within a distance 1.5(L _{array}) from the end of a row at an exposed edge of the array. Modules are considered exposed if d ₁ to the roof edge > 0.5h and one of the following applies: 1. d ₁ to adjacent array > 4ft. 2. d ₂ to the next adjacent mod > 4ft.				
Velocity Exposure Coefficient	C _e		Table 26.10-1								
Array Edge Factor	C _e		Exposed								
Array Edge Factor	C _e		Non-Exp								
Solar Panel Equalization Factor	C _e		Fig. 29.4-8								
Velocity Pressure	q _h	psf	q _h = 0.00256 K _z K _d K _e V ²								
Added Safety Factor	1										
Allowable Pullout per mount	518.0	lbs	For 0.4h or 0.6h								
0.4h or 0.6h	6.00	ft	10% of least hor. dim. Or 0.6h, whichever is smaller, but not less than 6" or 4" of Least hor. Or 36" (flat roof)								
10% of least horizontal dim	3.00	ft	Not a 10% (one) height above roof								
Roof Zone Set Back	3.00	ft	*min. distance any shall be from the roof edge. Gable 8/16" or, hip edge sub-pair between 10" panels but not > 6" ft								
h ₁	5	in	Horizontal distance orthogonal to panel edge								
2h ₂	0.25	in	Horizontal distance from edge of one panel to the nearest edge in the next row								
d ₁	1.00	ft									
d ₂	0.25	ft									
0.5h	7.50	ft									
PV Attachment - Results											
R1-R2 Roof Zones - Gable 8° to 20°											
1 2h 3h 4h											
GC _u - Upwind GC _d - Down											
p = q _h (GC _u / GC _d)W _{up} p = q _h (GC _u / GC _d)W _{up} p = q _h (GC _u / GC _d)W _{up}											
p = q _h (GC _u / GC _d)W _{up} p = q _h (GC _u / GC _d)W _{up} p = q _h (GC _u / GC _d)W _{up}											
p = q _h (GC _u / GC _d)W _{up} p = q _h (GC _u / GC _d)W _{up} p = q _h (GC _u / GC _d)W _{up}											
Point Load (Portrait Rails) -416.7 -416.7 -416.7											
Point Load (Landscape Rails) -353.4 -353.4 -353.4											
Point Load (Landscape Rails) -225.6 -225.6 -225.6											
Max Span (Portrait) 40 40 40											
Max Span (Landscape) 72 72 40											
Max Span (Landscape) 72 72 72											
Cantilever (Portrait) 16 16 16											
Cantilever (Landscape) 29 29 16											
*** Spans with Mark-through denote allowable Module pressure rating is exceeded.											
PV Dead Load											
QTY of Modules (3 in Portrait, 22 in Landscape)											
Module Area 21.34											
Rail Clamps Mounts 298											
Total Rail Length 47											
Module W _{mod} 1175											
Array W _{mod} 100											
Micro/optimizer W _{enc} 298											
PV Rail W _{pv rail} 1573											
Total Weight W _{total} 533.60											
Total Area A _t 2.95											
Dead Load D _y 30.2											
Weight/attachment											
Fastener Allowable Pullout											
(2) 1/4-14 x 1-1/2" ZAC Type AB-MP, Purlin											
Diameter 1/4											
Thread Embedment per 1 of Fastener											
Pullout Value (Source - Monf.) 518.0											
Module Load ratings (psf)											
Load Rating - Snow 113.4											
Load Rating - Wind 113.4											
Load Rating - Snow 113.4											
Load Rating - Wind 113.4											
Portrait											
Landscape											



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Donnie C Godwin
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08:19:51 -0500

Certificate Of Completion

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Subject: Tri-Party Net Metering Agreement (ELE)240176-Timothy Pontious

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Document Pages: 44

Signatures: 5

Certificate Pages: 5

Initials: 0

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Envelope Stamping: Enabled

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

Envelope Originator:

Porsha Ullrich

110 SE Watula Avenue

City Hall, Third Floor

Ocala, FL 34471

pullrich@ocalafl.gov

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pullrich@ocalafl.gov

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Storage Appliance Status: Connected

Pool: City of Ocala - Procurement & Contracting

Location: DocuSign

Signer Events

William E. Sexton

wsexton@ocalafl.org

City Attorney

City of Ocala

Security Level: Email, Account Authentication
(None)**Signature**

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jmittell@ocalafl.org

CFO

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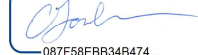
Chris Gowder

chris.gowder@fmpa.com

VP of IT/OT and System Ops

Security Level: Email, Account Authentication
(None)

DocuSigned by:



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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	11/16/2023 2:18:53 PM
Certified Delivered	Security Checked	11/17/2023 8:07:19 AM
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