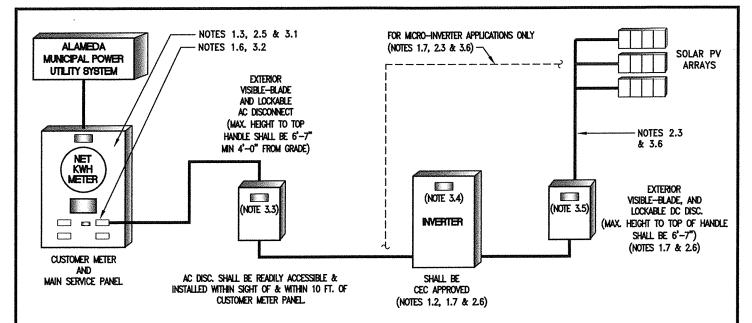
REV

DESCRIPTION

O NEW DRAWING



BLOCK DIAGRAM SOLAR PV INSTALLATION

1.0 GENERAL NOTES:

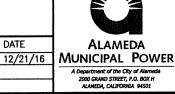
- ALL EQUIPMENT AND INSTALLATION SHALL MEET ALL APPLICABLE PROVISIONS OF THE FOLLOWING STANDARDS: UL STANDARD 1703, IEEE 929-2000, AND UL STANDARD 1741.
- 1.2 ALL EQUIPMENT AND INSTALLATION SHALL COMPLY WITH ALAMEDA MUNICIPAL POWER'S (AMP'S) INTERCONNECTION AND PURCHASE AGREEMENT FOR ELIGIBLE RENEWABLE GENERATION METERING, AMP'S RULES AND REGULATIONS, ALAMEDA ELECTRICAL CODE, CALIFORNIA ELECTRICAL CODE, NATIONAL ELECTRICAL CODE ARTICLE 690, CALIFORNIA STATE FIRE MARSHAL REGULATIONS, AND CALIFORNIA ENERGY COMMISSION'S (CEC) NEW SOLAR HOME PARTNERSHIP (NSHP) OR CALIFORNIA PUBLIC UTILITIES COMMISSION'S (CPUC) CALIFORNIA SOLAR INITIATIVE (CSI) LISTS OF ELIGIBLE EQUIPMENT.
- 1.3 IF THE EXISTING ELECTRICAL METER IS NOT CAPABLE OF MEASURING THE FLOW OF ELECTRICITY IN TWO DIRECTIONS, THE CUSTOMER SHALL BE RESPONSIBLE FOR ALL EXPENSES INVOLVED IN PURCHASING AND INSTALLING A NET KWH METER THAT IS ABLE TO MEASURE ELECTRICITY FLOW IN TWO DIRECTIONS.
- 1.4 CUSTOMER SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE SOLAR PHOTOVOLTAIC SYSTEM INSTALLATION INCLUDING ALL AMP'S COSTS THAT ARE RELATED TO THE PROJECT.
- CUSTOMER SHALL OBTAIN A CITY OF ALAMEDA ELECTRICAL PERMIT.
- SOLAR PHOTOVOLTAIC SYSTEM SHALL TERMINATE ON ITS OWN AC BREAKER IN THE MAIN SERVICE EQUIPMENT EXCLUSIVELY.
- THE DC DISCONNECT AND THE INVERTER AT GRADE LEVEL WILL NOT BE REQUIRED IF MICRO-INVERTER TECHNOLOGY IS PROPOSED ON THE SOLAR PV MODULES.
- AMP RESERVES THE RIGHT TO WITNESS THE FUNCTIONAL TESTS OF THE SOLAR PHOTOVOLTAIC SYSTEM INSTALLATION. THE CUSTOMER SHALL NOTIFY AMP AT LEAST 5 DAYS PRIOR TO THE ESTABLISHED DATE OF INSPECTION OR TESTING.
- APPROVAL FOR PARALLEL OPERATION WITH AMP'S DISTRIBUTION SYSTEM IS SUBJECT TO SUCCESSFULLY MEETING ALL REQUIREMENTS BY THE CITY'S BUILDING SERVICES DEPARTMENT AND AMP.
- 1.10 CUSTOMER SHALL SUBMIT DETAILED INFORMATION ON THE INVERTER TO VERIFY UL 1741 COMPLIANCE. THE CUSTOMER INVERTER SHALL HAVE THE FOLLOWING MINIMUM SPECIFICATIONS FOR PARALLEL OPERATION WITH AMP'S ELECTRIC DISTRIBUTION SYSTEM:

TITLE :

- INVERTER OUTPUT SHALL AUTOMATICALLY DISCONNECT FROM AMP'S UTILITY SOURCE UPON LOSS OF UTILITY VOLTAGE AND SHALL NOT BE RECONNECTED UNTIL THE UTILITY VOLTAGE HAS BEEN RESTORED.
- INVERTER SHALL AUTOMATICALLY DISCONNECT FROM AMP'S UTILITY SOURCE WITHIN 2 CYCLES (33ms) IF THE UTILITY VOLTAGE FLUCTUATES BEYOND ±10%.
- INVERTER SHALL AUTOMATICALLY DISCONNECT FROM AMP'S UTILITY SOURCE WITHIN 3 CYCLES (50ms) IF THE UTILITY FREQUENCY FLUCTUATES ±1 CYCLE (16ms).
- INVERTER OUTPUT DISTORTION SHALL MEET THE IEEE 519 STANDARDS.

RY

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SINGLE METER SOLAR PV INSTALLATION ELIGIBLE RENEWABLE GENERATION (UP TO 10KW)

DRAWN:	reycl/LVA	DATE:	DEC. 21, 2016			REV.
REVIEWED:	W A			1-L-	613	0
APPROVED:	11/2			SCALE : NTS	SHT <u>1</u>	OF <u>2</u>

- 2.2 GROUND MOUNTED SOLAR ARRAYS WILL BE ERECTED IN AREAS CLEAR OF COMBUSTIBLE VEGETATION. A MINIMUM VEGETATION CLEARANCE OR MOWED PERIMETER OF 10" SHALL BE MAINTAINED.
- 2.3 ALL SOLAR CONDUITS, INTERIOR OR EXTERIOR, SHALL BE PERMANENTLY LABELED WITH FADE RESISTANT . MATERIAL AS SHOWN IN 3.6. THIS LABEL SHALL BE INSTALLED EVERY 20'. FOR VERTICAL CONDUIT, A MINIMUM OF ONE LABEL SHALL BE AFFIXED AT EYE LEVEL.
- 2.4 BATTERY STORAGE IN ENCLOSED ROOMS TO BE MOUNTED A MINIMUM OF 24" ABOVE FLOOR. IF CONTAINED WITHIN CABINET, A PERMANENT PLACARD IS TO BE POSTED.
- 2.5 PERMANENT PLACARD SHALL BE INSTALLED ON EXTERIOR OF MAIN ELECTRICAL PANEL AS SHOWN IN 3.1.
- 2.6 ALL DISCONNECTS SHALL BE ACCESSIBLE TO AUTHORIZED REPRESENTATIVES OF THE CITY OF ALAMEDA. THE NET KWH METER, AC DISCONNECT, INVERTER AND DC DISCONNECT SHALL BE LOCATED TOGETHER WHEN POSSIBLE.
- 2.7 THE MAXIMUM LENGTH OR WIDTH OF THE SOLAR ARRAY SHALL NOT EXCEED 100 FEET.

3.0 LABELING REQUIREMENTS

LABELS SHALL HAVE A RED BACKGROUND WITH REFLECTIVE WHITE LETTERING AND SHALL BE FADE-RESISTANT. LETTERS SHALL BE 1/4-INCH MINIMUM. ALL LABELS SHALL BE PERMANENTLY INSTALLED ON EQUIPMENT.

LABEL LOCATION AND LABELING:

3.1 ELECTRIC PANEL (NOTE 2.5)

CAUTION DUAL POWER SUPPLY

AND

CAUTION SOLAR PV SYSTEM INSTALLED. WHEN POWER DISCONNECTED, SOLAR PANELS AND WIRING MAY REMAIN ENERGIZED DURING DAYLIGHT HOURS

3.2 ELECTRIC PANEL PV BREAKER. LETTERS MAY BE REDUCED TO 1/8-INCH MINIMUM IN HEIGHT AND INSTALLED IN THE MAIN ELECTRICAL PANEL, ADJACENT TO THE BREAKER.

> PHOTOVOLTAIC BREAKER

3.3 AC DISCONNECT

PHOTOVOLTAIC AC DISCONNECT

3.4 INVERTER

DESCRIPTION

O NEW DRAWING

PHOTOVOLTAIC INVERTER

BY

LS

DATE

12/21/16

3.5 DC DISCONNECTS (NEAR INVERTER)

PHOTOVOLTAIC DC DISCONNECT

3.6 CONDUITS (NOTE 2.3)

CAUTION SOLAR PV WIRING MAY REMAIN ENERGIZED AFTER DISCONNECTION DURING DAYLIGHT HOURS

ALAMEDA MUNICIPAL POWER A Department of the City of Alame 2000 GRAND STREET, P.O. BOX H ALAMEDA, CALIFORNIA 94501

TITLE : SINGLE METER SOLAR PV INSTALLATION ELIGIBLE RENEWABLE GENERATION (UP TO 10KW)

DATE: DEC. 21, 2016 DWG. NO. : REV. reyclo/LVA DRAWN: 1-L-613 0 REVIEWED: SHT 2 OF 2 APPROVED: SCALE : NTS



PRELIMINARY SINGLE METER SOLAR PV INSTALLATION ELIGIBLE RENEWABLE GENERATION (UP TO 10 KW) PLANNING SHEET

Project Name:
Location:
Electrical Consultant or Applicant Completing Form:
Address: Telephone No.:
Tentative Date of Parallel Operation of the Solar PV installation with the Utility System:
BUILDING AND METERING INFORMATION
• Number of Meters in the Building:
• Customer Meter Number:
SOLAR PV EQUIPMENT INFORMATION
 PV Modules (per UL Standard 1703): Orientation (90°E to 270°W):; Tilt/Incline (0° to 60°): Model #:; Rating (Watt/Module):; No. of Modules: No. of Strings of Modules:; String Protection: Yes; No Inverter (per UL Standard 1741); Micro-Inverter: Yes; No
OTHER REQUIRED INFORMATION
Cost Breakdown for Meter Socket Installation Submitted to AMP: Yes; No Drawing Submittals: Site Plan & System Layout; 1-Line or 3-Line Diagram; Equipment data and/or Cut-sheets; Other: Alameda Municipal Power Interconnection and Purchase Agreement Yes; No City of Alameda Electrical Application Permit Number:
NOTE: Alameda Municipal Power intends to use this form for preliminary job planning. The service equipment will also have to be inspected and approved by the City's Electrical Inspector, (510) 748-4634, and the Alameda Fire Department, (510) 337-2120, before it can be energized.



Eligible Renewable Generation Application

Solar Rebate Program

Senate Bill (SB) 1 required that Alameda Municipal Power (AMP) collect and pay out \$4.2 million in rebates from 2008 through 2017 to customers that installed solar photovoltaic (PV) systems. AMP's Solar Rebate Program has been fully subscribed and is now completed.

System Requirements

Under statute, one ERG customer is defined as the load served by one meter. PV systems must also comply with State-established standards, which include optimum orientation and tilt of panels, acceptable shade analysis results, certification of equipment and installers, and system warranties.

Systems shall be sized to meet customer consumption and minimize over-generation. During the ERG interconnection application review, AMP shall verify that the Rider ERG customer has sized their system to be no more than 110% of the annual electric consumption recorded for the ERG customer during the previous 12 months of service. If the service is new, the estimated annual electric consumption shall be estimated by the ERG customer on the ERG interconnection application, confirmed by AMP, and then used by the ERG customer to establish the ERG system sizing.

ERG customers must accept the terms and conditions contained in AMP's Interconnection Agreement For Residential, Commercial or Municipal Eligible Renewable Electrical Generation Facilities Under Rider ERG, or Interconnection Agreement For Federal Agencies Under the Rider ERG (ERG Interconnection Agreement), and obtain necessary building permits from the City of Alameda.

The interconnection application fee(s) under Rider ERG shall be:

- \$330 for residential installations,
- \$660 for commercial and multi-family installations up to 50 kilowatts (kW), and
- \$1,100 for installations greater than 50 kW

Changes to System

A Customer-Owner must notify AMP at least 60 days prior to any change in ownership of a system or system relocation. AMP will conduct a mandatory site inspection upon reinstallation. Additionally, a system relocation or change in capacity requires new building permits from the City of Alameda. Both a change in ownership and system relocation will require that a new ERG Interconnection Agreement be signed and proof of insurance must be provided.



Eligible Renewable Generation Application

Date	Sequential Steps	Notes
	1. Energy audit (OPTIONAL)	Call AMP at <i>(510) 748-3900</i> to schedule a free energy audit.
	2. Application	Submit (via mail or email) the following to AMP's Customer Resources Department:
		 Eligible Renewable Generation Application Form For Rider ERG customer-generators only: check payable to Alameda Municipal Power for the appropriate Interconnection Application Fee 2 signed copies of ERG Interconnection Agreement Declarations Page(s) of customer's insurance policy Contract w/installer/system owner/retailer, if applicable System drawing Copy of system warranty (solar) Shading analysis (solar) EPBB calculation for Design Factor (Solar)
		AMP will review the application to insure the system meets our criteria for interconnection. AMP will send an email or letter confirming receipt of all required documents.
	3. Building permit	Obtain building permit at the Permit Center in City Hall, located in Room 190 within the Community Development Department. For more information, please call 510-747-6800 . To check status of the permit application, go to the <i>ePermit</i> Portal: http://alamedaca.gov/epermit-portal .
	4. Electrical inspection	Upon completion of system installation, call Permit Center at (510) 747-6830 to schedule final electrical inspection.
	5. Interconnection	Upon receiving final Electrical approval from the Building Department, call AMP's Electrical Maintenance Group at (510) 748-3981 to schedule a system interconnection.

PLEASE CONTACT 510-814-6414 OR 510-748-3954 WITH QUESTIONS



Eligible Renewable Generation Application

- **1. AMP Customer Information:** Provide the required customer information, including street address where the system will be installed and AMP account number for existing customers.
- 2. Installer Information: Provide required installer information, including California license class (e.g. C-10, electrical or C-46, solar), and license number. A minimum 10-year warranty is required for all PV systems. PV Installers must be registered with the California Energy Commission (CEC) (list of registered installers available at www.gosolarcalifornia.ca.gov/database/search-new.php).
- 3. System Owner Information: Provide system owner information if different from AMP customer.
- **4. Generating System**: It may be useful for the customer to review the general discussion of PV system specifications and installation guidelines at: www.energy.ca.gov/reports/2001-09-04 500-01-020.PDF.
 - a. **PV Modules:** Enter the manufacturer's name, model number, watts per module as reported by the CEC, and quantity of photovoltaic modules in the system. The CEC maintains a list of **eligible modules** and their "PVUSA Test Conditions" (PTC) ratings on its website at www.gosolarcalifornia.ca.gov/equipment/pv modules.php.
 - b. **Inverters:** Enter the manufacturer's name, model number, and efficiency (as reported by the CEC) of the inverter(s) in the system. The CEC maintains a list of **eligible inverters** and their efficiency ratings at www.gosolarcalifornia.ca.gov/equipment/inverters.php. Check the appropriate box based on whether or not the inverter has a built-in performance meter.
 - **c.** For solar PV systems, multiply the PTC watts per module, quantity of modules, and inverter efficiency to calculate the total AC system capacity. Fill out the orientation and incline angles for the installation. Enter estimated energy production in kilowatt-hours from the California Solar Initiative's Expected Performance Based Buydown (EPBB), available at www.csi-epbb.com/default.aspx. Enter PG&E for the utility and monthly shading derate factors to calculate the Design Factor.
- **5. For other forms of generation other than solar**: Fill out the rated kilowatts and estimated annual kilowatthour (kWh) generation.
- Installed System Cost: Enter total cost of the system, including equipment and installation.
- **7. Required Attachments:** In addition to the completed application form and check payable to Alameda Municipal Power for the appropriate Interconnection Application Fee, submit the following documents:
 - a. Copy of all contracts between customer and installer, system owner, and/or retailer
 - b. Declaration Page(s) of customer's homeowner or business liability insurance policy coverage
 - c. 2 original signed copies of the ERG Interconnection Agreement (with check if Rider ERG customer)
 - d. System drawing to be submitted with city building permit application
 - e. Copy of installer warranty (Solar)
 - f. Shading analysis (e.g. www.solarpathfinder.com or site photos depicting no shading) (Solar)
 - g. EPBB calculation for Design Factor (Solar)
- 8. Billing Option: Select whether billing is under the ERG Rider or remaining kilowatts of the NEM Rider.



Eligible Renewable Generation Application

1.	AMP Customer (Physic	al Site of Installation) 🗌 Reside	ential 🗌 Commercial 🔲 Municipal	
Nan	ne on AMP Account		AMP Account #	
Serv	rice Address	Alameda, CA 9450		
Ema	il	Phone	Fax	
2.	Installer Information			
Com	npany Name	Co	ntact Name	
Pho	ne	Fax	Email	
Con	tractor Class	License #	Expires	
Inst	aller Warranty 🔲 10-ye	ear 🗌 Other		
3.	System Owner Inform	nation (if different from AMP	Customer above, i.e., leased system)	
Com	npany Name	Cor	ntact Name	
Pho	ne	Fax	Email	
4a.	PV System (see www.go	osolarcalifornia.org/equipment/	<u>'index.html</u>)	
Mod	dule Manufacturer	Module Model #	CEC Watts/Module	Quantity
Inve	rter Manufacturer	Inverter Model #	Efficiency	Quantity
Inve	erter includes performanc	e meter?		
4b.	PV System Rated Cap	acity and Energy Production	on	
		· -	er Efficiency = System Rated Cap =	•
Orie	entation (between 90°E and	1 270°W)°	=° Tilt/Incline (0° to 60°)°	
5.	Non-PV System			
Mar	nufacturer	Module Model #	No. of Generators Total kW	Estimated kWh
6.	Installed System Cost			
Tota	al cost of system \$			



Eligible Renewable Generation Application

System drawing from City building permit
r Warranty for Solar
Jpon Completion)
ipproval of the <i>Eligible Renewable Generation Application</i> ew <i>Eligible Renewable Generation Application Form</i> must ss, signed, and returned to AMP.
which AMP reaches the 3.6 MW (5% cap) of net metering ect to be served under Rider ERG by selecting the option option on the Eligible Renewable Generation Application
nder remaining kilowatts of the NEM Rider.
nder the ERG Rider.
of perjury that: correct to the best of my knowledge; the listed site of installation for its useful life.
Date:
Date:
enewable Generation Application Form & Department:
Delivery or Mail
Alameda Municipal Power
Renewable Generation Program
2000 Grand Street
P.O. Box H Alameda, CA 94501

ALAMEDA MUNICIPAL POWER INTERCONNECTION AGREEMENT

For Residential, Commercial or Municipal Eligible Renewable Electrical Generation Facilities

This Interconnection A	Agreement for Eligib	le Renewable	Generation (I	ERG) of a Re	esidential, Co	mmercial
or Municipal Eligible	Renewable Electrication	al Generation	Facility (the	"Agreement	z") is made	as of the
following date:	(the '	'Effective Date	e") by the Part	ies identifie	d in Section 1	L (Parties)
of this Agreement.	Capitalized terms	not defined	when used I	nerein are	defined in	Section 1
(Definitions) of the Ge	eneral Conditions ap	plicable to thi	s Agreement,	which are he	ereby incorp	orated by
reference as if fully se	t forth herein.					

Section 1. PARTIES.

The Parties to this Agreement are:

The CITY OF ALAMEDA, a municipal corporation, doing business as ALAMEDA MUNICIPAL POWER ("AMP"), and

The Customers identified in the boxes below. If both boxes are completed below, the term "Customer" shall refer to both "Customer-Owner" and "Customer-Tenant," unless otherwise stated.

CUSTOMER-OWNER	CUSTOMER –TENANT
Name:	Name:
AMP Account No.: (if applicable)	AMP Account No.:
Mailing Address :	Mailing Address :
City Zip:	City Zip:
Phone:	Phone:
Facsimile:	Facsimile:
Email:	Email:
PREMISES OF ELIGIBLE RENEWA	ABLE GENERATION FACILITY
Street Address:	

Section 2. TERM.

The term of this Agreement is ten (10) years from the Effective Date unless it is earlier terminated as set forth in Section 16 of the General Conditions applicable to this Agreement.

AMP INTERCONNECTION AGREEMENT

For Residential, Commercial or Municipal Eligible Renewable Electrical Generation Facilities Approved by PUB Resolution No. XXXX (November 21, 2016)

This Rev. No. 2.0 supersedes all prior versions in full Effective: December 31, 2016

Section 3. CONDITIONS TO INTERCONNECT.

- 3.1 The Customer may interconnect a Generation Facility to AMP's Municipal Power Supply System with the specifications identified in the General Conditions applicable to this Agreement and described with more particularity in AMP's Rules and Regulations, both of which are incorporated into this Agreement, as if fully set forth herein. In addition, the Customer agrees that:
 - **3.1.1** The Generation Facility is intended primarily to offset part or all of the Customer's own electrical requirements at the service address;
 - **3.1.2** The Customer will not sell to any third person or otherwise provide electricity from the Generation Facility to any real estate parcel, premise, or location other than the premises that are the subject of this Agreement;
 - **3.1.3** The Generation Facility shall be constructed, installed, operated and maintained as described in this Agreement; and
 - **3.1.4** The Customer is an "Eligible Customer-Generator" pursuant to Section 2827(b) of the California Public Utilities Code as now in effect or as the same may be amended from time to time.

Section 4. INSURANCE.

The Customer shall obtain, maintain and provide to AMP proof of current insurance prior to the Effective Date and annually thereafter on the anniversary of the Effective Date for the term of this Agreement. The required insurance shall cover the Generation Facility consistent with the specifications for commercial or residential generation facilities set forth in Section 8 of the General Conditions applicable to this Agreement. In addition, the Customer's policy shall include the following endorsements: (1) addition of the City of Alameda, AMP, and their respective officers, officials, employees and volunteers as additional insureds; (2) waiver of subrogation against the additional insureds; and (3) naming of the additional insureds as loss payee.

Failure to timely submit such proof of insurance to AMP's satisfaction may result in disconnection of the Generation Facility from the AMP Municipal Power Supply System and termination of this Agreement.

Section 5. APPLICABLE TARIFFS AND OTHER REQUIREMENTS

5.1 This Agreement incorporates the following documents, as all may be amended from time to time, by reference as if fully set forth herein, all of which are available electronically for inspection at www.alamedamp.com:

AMP INTERCONNECTION AGREEMENT

For Residential, Commercial or Municipal Eligible Renewable Electrical Generation Facilities Approved by PUB Resolution No. XXXX (November 21, 2016)

This Rev. No. 2.0 supersedes all prior versions in full Effective: December 31, 2016

- **5.1.1** AMP's Rules and Regulations;
- **5.1.2** AMP's Rider NEM;
- **5.1.3** AMP's Rider ERG;
- **5.1.4** AMP's Interconnect Agreement General Conditions; and
- **5.1.5** AMP's Eligible Renewable Generation Application executed by the Customer.
- 5.2 AMP may, from time to time, modify its Rules and Regulations, Rider NEM, Rider ERG, and Interconnect Agreement General Conditions. Any such amendments would require action of the Public Utilities Board at a duly noticed public meeting. All amendments to such documents will be made available on the AMP website.
- 5.3 In the event of any conflict or inconsistency between the documents associated with this Agreement, the AMP document that controls shall be as follows: (a) Rules and Regulations govern over all other documents; (b) Rider NEM and Rider ERG govern over all other documents except the Rules and Regulations; (c) Interconnection Agreement General Conditions governs over all other documents except the Rules and Regulations, Rider NEM and Rider ERG; and (d) Eligible Renewable Generation Application, executed by the Customer, governs over this Interconnection Agreement.

Section	6.	PAYMENT	FOR	POWFR

AMP s	hall compe	nsate the Customer for	r net surplus ele	ectricity in accorda	nce with Ridei
NEM (if available)	or Rider ERG	(If the NE	EM program is fully	/ subscribed).

Section 7. NOTICE

Any notice to AMP required by the Agreement shall be provided to AMP in writing as follows: Alameda Municipal Power; 2000 Grand Street; P.O. Box H; Alameda, CA 94501 ATTN: General Manager. For emergencies, Customer shall contact AMP's 24-hour emergency number, (510) 748-3902.

AMP INTERCONNECTION AGREEMENT

For Residential, Commercial or Municipal Eligible Renewable Electrical Generation Facilities Approved by PUB Resolution No. XXXX (November 21, 2016)

This Rev. No. 2.0 supersedes all prior versions in full

Effective: December 31, 2016

IN WITNESS WHEREOF, the Parties have above written.	ve caused this Agreement to be duly executed as of the date first
Date:	Date:
CUSTOMER-OWNER	CUSTOMER-TENANT (if applicable)
Ву:	Ву:
Name (Print):	Name (Print):
Title (Print):	Title (Print):
	APPROVED by the CITY OF ALAMEDA, a municipal corporation, doing business as ALAMEDA MUNICIPAL POWER ("AMP"):
	Ву:
	Name: Elizabeth D. Warmerdam
	Title: Interim General Manager
	APPROVED AS TO FORM
	Ву:
	Name: Alan M. Cohen Title: Assistant City Attorney

AMP INTERCONNECTION AGREEMENT

For Residential, Commercial or Municipal Eligible Renewable Electrical Generation Facilities Approved by PUB Resolution No. XXXX (November 21, 2016)

This Rev. No. 2.0 supersedes all prior versions in full

Effective: December 31, 2016

ALAMEDA MUNICIPAL POWER NEM and ERG INTERCONNECTION AGREEMENT GENERAL CONDITIONS

For Residential, Commercial or Municipal Eligible Renewable Electrical Generation Facilities Under the NEM Rider or the ERG Rider

These General Conditions (the "General Conditions") are applicable to all Net Energy Metering (NEM) Interconnection Agreements and all Eligible Renewable Generation (ERG) Interconnection Agreements executed between AMP and Customer.

These General Conditions are incorporated by reference into all such NEM and ERG Interconnection Agreements. These General Conditions are subject to change consistent with Section 3 of these General Conditions, in AMP's sole discretion and with the consent of the Alameda Public Utilities Board.

SECTION 1. DEFINITIONS

- (A) "AMP" means the City of Alameda, a municipal corporation, doing business as Alameda Municipal Power.
- (B) "AMP Account Holder" means the AMP customer that is responsible for the energy meter billing account(s) at the service location. If a Customer-Tenant is the AMP Account Holder at the service address, then billing transactions, including usage charges, fees and excess generation credits, shall be made to that AMP account.
- (C) "AMP Municipal Power Supply System" means AMP's distribution system, either overhead or underground, located in a public right of way and/or an easement, to supply electrical energy to the Customer.
- (D) "Customer" means both Customer-Owner and Customer-Tenant, where both Customer-Owner and Customer-Tenant are signatories to the Interconnection Agreement, unless otherwise specified. See AMP Account Holder.
- (E) "Customer-Owner" means the owner or landlord of the property where the Generation Facility will be located.
- (F) "Customer-Tenant" means the tenant to be served by the Generation Facility, if the tenant is the AMP Account Holder.
- (G) "Effective Date" means the date set forth on page one of the Interconnection Agreement.
- (H) "Eligible Renewable Generation" means renewable electrical generation sources specified in the California Public Utilities Code.

AMP NEM and ERG INTERCONNECTION AGREEMENT – GENERAL CONDITIONS

Residential, Commercial or Municipal Eligible Renewable Electrical Generation Facilities *Approved by PUB Resolution No. XXXX (November 21, 2016)*

This Rev. No. 2.0 supersedes all prior versions in full

- (I) "Effective Date" means the date set forth on page one of the Interconnection Agreement.
- (J) "Energy Meter" means a single meter capable of registering the flow of electricity in two directions as described in paragraph (1) of subdivision (c) of Section 2827 of the California Public Utilities Code. Electricity provided to the customer will measure on the "delivered" register and renewable energy provided to AMP will be measured on the "received" register.
- (K) "Generation Facility" means the Eligible Renewable Electrical Generation Facility identified in the AMP Eligible Renewable Generation Application Form executed by Customer.
- (L) "Interconnection Agreement" means the NEM or ERG Interconnection Agreement for Residential, Commercial or Municipal Eligible Renewable Electrical Generation Facilities that Customer has executed with AMP.
- (M) "MW" means megawatt.
- (N) "Party" or "Parties" refers individually to AMP, Customer-Owner or Customer-Tenant or to those entities collectively.
- (O) "Public Utilities Board" or "PUB" means the regulatory body established by Section XII of the Alameda City Charter to oversee the operation of any City owned public utility.
- (P) "Premises" means the property where the Generation Facility and all associated equipment and instrumentation, including without limitation, metering equipment, are located.
- (Q) "Renewable Electrical Generation Facility" means a facility that generates electricity from a renewable source listed in paragraph (1) of subdivision (a) of Section 25741 of the California Public Resources Code, as the same may be amended from time to time.

SECTION 2. PURPOSE

The Customer has elected to construct, design, install, interconnect, operate and maintain a residential, commercial or municipal Eligible Renewable Generation Facility, not to exceed 1 MW, on premises within AMP service territory to operate in parallel with the AMP Municipal Power Supply System.

These General Conditions apply to the Customer's Generation Facility with the specified characteristics indicated in the Eligible Renewable Generation Application Form, including, without limitation, the location and nameplate rating identified therein, and

AMP NEM and ERG INTERCONNECTION AGREEMENT – GENERAL CONDITIONS

^{***}This Rev. No. 2.0 supersedes all prior versions in full***

does not allow for interconnection or operation of any generation facilities different than those described therein.

The Generation Facility may not be relocated, modified or connected to AMP's system at any other location without AMP's express written permission.

SECTION 3. INTERCONNECTION, OPERATION AND MAINTENANCE

(A) <u>Interconnection</u>.

- (1) The Customer shall not commence interconnection to AMP's electric system (parallel operation) of the Generation Facility until an Interconnection Agreement has been executed by AMP and Customer.
- (2) AMP's review and acceptance of Customer documents in connection with such approval shall not warrant, confirm or endorse the Customer's Generation Facility design, or the durability, safety, performance, adequacy, strength, compatibility or reliability of the Generation Facility's equipment.

(3) Metering.

- (a) The Customer shall deliver energy from the Generation Facility to AMP at the Energy Meter.
- (b) AMP reserves the right to install additional metering equipment at customer's expense. AMP may install, with the consent of the Customer which shall not unreasonably be withheld, an additional meter or meters to monitor the generation of electricity by the Generation Facility. The additional metering shall be used to provide information necessary to accurately bill or credit the Customer, or to collect performance information on the Generation Facility for research or reporting purposes relative to an Eligible Renewable Generation Facility.
- (4) The Customer agrees to allow AMP representatives to have access to or to test the Generation Facility at any time.

(B) Operation and Maintenance.

- (1) The Customer shall, at their sole expense, be responsible for:
 - (a) The construction, design, installation, operation and maintenance of the Generation Facility, without cost to AMP, in accordance with applicable law and regulations and in a manner consistent with the normal and safe operation of the Municipal Power Supply System owned and operated by AMP, including the installation of any control, protective and safety devices

AMP NEM and ERG INTERCONNECTION AGREEMENT – GENERAL CONDITIONS

^{***}This Rev. No. 2.0 supersedes all prior versions in full***

and equipment as AMP requires at the time the Interconnection Agreement is executed or required by AMP in the future for parallel operation of the Generation Facility with AMP's Municipal Power Supply System;

- (b) All legal and financial obligations arising from the construction, installation, design, operation, and maintenance of the Generation Facility, including, without limitation any lease agreements for Generation Facility equipment, in accordance with all applicable laws and regulations;
- (c) Maintenance of the Generation Facility and all related equipment in a safe and prudent manner and in conformance with all applicable laws, including, but not limited to AMP's Rider NEM, Net Energy Metering, AMP's Rider ERG, Eligible Renewable Generation and AMP's Rules and Regulations, as such may be amended from time to time; and
- (d) Obtaining and maintaining all permits and authorizations in accordance with all applicable laws and regulations for the construction, installation, design, operation and maintenance of the Generation Facility. Customer shall hold AMP harmless from and reimburse AMP for any and all losses, damages, claims, penalties, or liability AMP incurs as a result of Customer's failure to obtain or maintain any governmental authorizations and permits required for construction, installation, operation or maintenance of the Generation Facility.
- (2) The Customer shall ensure that the Generation Facility meets all applicable safety and performance standards established by the National Electrical Code, the Institute of Electrical and Electronics Engineers, and accredited testing laboratories, including Underwriters Laboratories, applicable building, electrical and fire codes and to all applicable AMP Rules and Regulations as now in effect or as the same may be amended from time to time.

(C) Facility Modifications.

Customer shall not make modifications to the Generation Facility without written authorization of such modifications from AMP. To secure prior written authorization, Customer must submit a new Eligible Renewable Generation Application Form to AMP, proceed through the approval process for such Eligible Renewable Generation Application Forms, and secure advance written approval of such modifications from AMP prior to interconnection of any modified Generation Facility to the AMP system.

SECTION 4. MODIFICATIONS TO GENERAL CONDITIONS

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AMP may, in its sole discretion and with the approval of the Alameda Public Utilities Board, modify these General Conditions. Customer understands that if they do not agree to comply with any modifications to such documents, their Generation Facility will be disconnected from the AMP system.

SECTION 5. BILLING AND CREDITS

The Customer shall be compensated in connection with the operation of its Generation Facility in accordance AMP's Rider NEM or Rider ERG.

SECTION 6. INTERRUPTION OR REDUCTION OF DELIVERIES

(A) AMP may require the Customer to interrupt or reduce deliveries of energy to AMP.

AMP shall not be obligated to accept energy from Customer's Generation Facility:

- (1) When necessary in order to construct, install, maintain, repair, replace, remove, investigate, or inspect any of AMP's equipment or part of AMP's system; or
- (2) If AMP determines, in its sole discretion, that curtailment, interruption, or reduction of receipt of energy from the Generation Facility is necessary because of emergencies, forced outages, force majeure, or compliance with prudent electrical practices.
- (B) Notwithstanding any other provision of the Interconnection Agreement, these General Conditions or associated documents to the contrary, if at any time AMP, in its sole discretion, determines that the Generation Facility may endanger AMP personnel, customers, or members of the public, or that the continued operation of the Generation Facility may impair the integrity of AMP's Municipal Power Supply System, AMP shall have the right to immediately, and without notice, disconnect the Generation Facility from AMP's Municipal Power Supply System. However, AMP shall endeavor to provide reasonable notice of interruption, or reduction of deliveries, from Customer's Generation Facility as practical.

The Customer's Generation Facility shall remain disconnected until such time as AMP is satisfied that the conditions identified in this subsection have been resolved and corrected.

- (C) The Customer shall not reconnect a Generation Facility where AMP has interrupted, disconnected or reduced deliveries until the Customer receives written authorization from AMP to reconnect or increase deliveries.
- (D) AMP shall not be obligated to compensate the Customer for any loss of use of generation of energy during any and all periods of interruption, disconnection or

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reduced deliveries. AMP shall not provide the Customer with any reimbursement or pay any claim related to loss, or potential loss of generation compensation or credits.

SECTION 7. ACCESS TO PREMISES

AMP shall have immediate and unhindered access to Customer's Premises without prior notice:

- (A) To inspect at all reasonable hours the Customer's protective devices or Generation
 Facility equipment or to test, maintain, remove or replace any AMP meter or
 equipment for the Generation Facility;
- (B) To disconnect the Generation Facility, at any time, without notice to the Customer, where, in AMP's sole discretion, hazardous or illegal conditions exists and that immediate action is necessary to protect persons or AMP facilities, or property of others from damage or interference caused by:
 - (1) The Generation Facility; or
 - (2) The Customer's failure to comply with the requirements of the Interconnection Agreement or the documents incorporated into it by reference; and
 - (3) To read the meter for billing purposes.

SECTION 8. INSURANCE

- (A) <u>Commercial</u>, <u>Residential Policy Requirements</u>. The Customer-Owner shall be required to obtain and maintain insurance for the term of the Interconnection Agreement as follows:
 - (1) Generation Facilities located on commercial property. A commercial general liability insurance policy at least as broad as the Insurance Services Office (ISO) commercial general liability coverage "occurrence" form; or, if the Customer Generator is an individual, then liability coverage with respect to premises and use at least as broad as the ISO homeowners' or personal liability Insurance occurrence policy form, or substitute.
 - (a) The commercial Customer-Owner's insurance shall, by endorsement
 - (i) Additional Insured Status. Add "the City of Alameda, AMP, and their respective officers, officials, employees and volunteers" as an additional insured; and

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- (ii) Loss Payee Status. Add "the City of Alameda, AMP, and their respective officers, officials, employees and volunteers" as a loss payee on the policy; and
- (2) <u>Coverage Limits</u>. The Customer-Owner shall provide equivalent coverage no less than the following limits, based on generator size:

Generation Facility Nameplate Rating	Insurance Coverage Limit
10kW or less	\$200,000/occurrence
10kW to 20kW	\$500,000/occurrence
20kW to 100kW	\$1 million/occurrence
Over 100kW	\$2 million/occurrence

- (3) Generation Facilities located on residential property. A homeowners insurance policy that includes all necessary endorsements to cover the Generation Facility installed at the premises and any damages, losses or injuries caused by that Generation Facility, including but not limited to damages, losses or injuries involving AMP officers, officials, employees, contractors or volunteers, or to AMP's Municipal Power Supply System.
- (B) All Policy Requirements. The Customer-Owner's insurance shall, by endorsement:
 - (a) <u>Primary, Non-contributory</u>. State that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by the City of Alameda or AMP.
 - (b) <u>Waiver of Subrogation</u>. The Customer-Owner agrees to waive subrogation which any insurer of the Customer-Owner may acquire by virtue of the payment of any loss. The Customer-Owner agrees to obtain any endorsement that may be necessary to effect such a waiver of subrogation.
- (C) <u>Verification and Maintenance of Coverage</u>. Prior to AMP's execution of the Interconnection Agreement, and on an annual basis thereafter on or before the date specified in the Interconnection Agreement, the Customer-Owner shall provide a Certificate of Insurance and any other information reasonably requested by AMP to demonstrate compliance with all applicable insurance provisions contained herein. Failure to timely submit such proof of insurance to AMP's satisfaction may result in disconnection of the interconnection of the Generation Facility from the AMP Municipal Power Supply System and termination of this Interconnection Agreement.
- (D) Notice of Cancellation or Reduction in Insurance Coverage. The Customer-Owner shall provide at least thirty (30) days prior written notice to AMP of any reduction in

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scope or amount, cancellation, or modification adverse to AMP of the policies referenced in this Section.

(E) Exception to Insurance Requirements. AMP may, in its sole discretion, waive all or a portion the insurance requirements set forth in this Section 7 where the Customer-Owner demonstrates to AMP's satisfaction that the Generation Facility satisfies Section 2827(j) of the California Public Utilities Code.

SECTION 9. INDEMNITY AND LIABILITY

- (A) The Customer shall indemnify and hold the City of Alameda, AMP, and their respective directors, officers, officials, agents, employees, contractors, and volunteers harmless against all loss, damages, expense, and liability to third persons, for injury to or death of persons or injury to property caused by the Customer's engineering, design, construction, installation, ownership, maintenance or operations of, or the making of replacements, additions or betterment to, or by failure of, the Generation Facility. The Customer shall, on AMP's request, defend any suit asserting a claim covered by this indemnity using counsel reasonably acceptable to AMP. The Customer shall pay all costs that may be incurred by AMP in enforcing this defense and indemnity obligation.
- (B) Nothing, in the Interconnection Agreement or these General Conditions shall be construed to create any duty to, any standard of care with reference to, or any liability to, any person not a Party to the Interconnection Agreement. Neither the City of Alameda, AMP, or their respective officers, agents or employees, contractors or volunteers shall be liable for any claims, demands, costs, losses, causes of action, or any other liability of any nature or kind, arising out of the engineering, design, construction, ownership, maintenance or operation of, or making of replacements, additions or betterment to, the Customer's Generation Facility except to the extent actually caused by the sole, gross negligence of AMP.
- (C) The City of Alameda, AMP, their respective directors, officers, officials, agents, employees, contractors and volunteers shall not be liable for damages of any kind to the Generation Facility caused by any electrical disturbance of the AMP system, or on the system of another, whether or not the electrical disturbance results from the negligence of AMP.

SECTION 10. GOVERNING LAW, VENUE

In the event that either Party brings any action against the other under the Interconnection Agreement or these General Conditions the Parties agree that California law governs and that trial of such action shall be vested exclusively in the state courts of

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California in the County of Alameda or in the United States District Court for the Northern District of California.

SECTION 11. WAIVER

The failure of any Party at any time or times to require performance of any provision hereof shall in no manner affect the right at a later time to enforce the same. No waiver by any Party of the breach of any term or covenant contained in this Agreement, whether by conduct or otherwise, shall be deemed to be construed as a further or continuing waiver of any such breach or a waiver of the breach of any other term or covenant unless such waiver is in writing.

SECTION 12. ASSIGNMENT

The Interconnection Agreement is between AMP and the Customer only. Any attempted assignment shall be null and void.

SECTION 13. NO THIRD PARTY BENEFICIARY

The Interconnection Agreement and these General Conditions shall not be construed or deemed to be an agreement for the benefit of any third party or parties, and no third party or parties shall have any claim or right of action under the Interconnection Agreement or these General Conditions for any cause whatsoever.

SECTION 14. SUCCESSORS

The Interconnection Agreement and these General Conditions are not applicable to any successor in interest to the Generation Facility or Premises. Any successor in interest must therefore enter into a new Interconnection Agreement with AMP.

SECTION 15. INCORPORATION.

The Customer understands, accepts, and agrees that construction, installation, connection, operation and maintenance of the Generation Facility shall be subject to the terms and conditions set forth in the Interconnection Agreement, AMP's Eligible Renewable Generation Application Form executed by the Customer, these General Conditions, those terms and conditions set forth in AMP's Rider NEM or Rider ERG, and AMP's Rules and Regulations, as now in effect or as the same may be amended from time to time in AMP's sole discretion and each of which is incorporated by reference into the Interconnection Agreement.

SECTION 16. TERM, TERMINATION

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(A) <u>Term</u>. An Interconnection Agreement shall be in effect for ten (10) years from the Effective Date identified in the Interconnection Agreement.

(B) Termination.

- (1) <u>By Customer</u>. The Customer may terminate the Interconnection Agreement for any reason; provided that the Customer provides sixty (60) calendar days advance written notice to AMP that it intends to terminate this Agreement and permanently disconnects the Generation Facility from AMP's Municipal Power Supply System on or before the termination date.
- (2) <u>By AMP</u>. AMP may terminate this Agreement upon ten (10) calendar days advance written notice to the Customer:
 - (a) For any violation of the Interconnection Agreement or the documents incorporated into it by reference; including, without limiting the generality of the foregoing, non-payment of bills, the Customer's failure to satisfy applicable safety and performance standards set forth in the Interconnection Agreement or Section 3 of these General Conditions; or failure to maintain insurance as required by the Interconnection Agreement or Section 8 of these General Conditions;
 - (b) Where the Generation Facility interferes with the quality, safety or delivery of AMP service to other customers;
 - (c) Where the Customer abandons the Generation Facility or AMP account. AMP shall deem the Generation Facility to be abandoned if AMP determines, in its sole opinion, that the Generation Facility or AMP account is non-operational and the Customer does not affirm the Customer's intent and ability to continue to operate the Generation Facility or receive service under the AMP Account in response to any AMP Notice of its intent to terminate this Agreement as a result of the Customer's apparent abandonment of the Generation Facility or AMP account;
 - (d) In response to a change in applicable rules, tariffs, or regulations, as approved or as directed by the Alameda Public Utilities Board, or a change in any local, state or federal law, statute or regulation, any of which materially alters or otherwise affects AMP's ability or obligation to perform AMP's duties under the Interconnection Agreement, or these General Conditions;

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- (e) If at any time AMP determines that the Generation Facility has been modified or connected to AMP's Municipal Power Supply System without the permission of AMP, or without a valid and existing Interconnection Agreement in place;
- (f) If AMP no longer provides electric service to the Customer; or
- (g) If the Customer or the Generation Facility no longer satisfy eligibility requirements under the Interconnection Agreement, or these General Conditions.
- (3) <u>Termination Payments, Credits and Disconnection Costs</u>. In the event that the Interconnection Agreement is terminated pursuant to this Section of the General Conditions:
 - (a) Payments or credits due to and among the Customer and AMP shall be billed or credited per AMP's Rider NEM or Rider ERG, and any electric service that continues to be provided by AMP shall be pursuant to and in accordance with the applicable AMP tariff or rate schedule; and
 - (b) The Customer's Generation Facility shall be permanently disconnected from AMP's Municipal Power Supply System and the Customer shall be jointly responsible for all costs incurred as a result of disconnection, regardless of which Party terminated the Interconnection Agreement.

SECTION 17. SPECIAL PROVISIONS APPLYING TO FEDERAL AGENCY CUSTOMERS ONLY.

The following provisions shall only apply to Interconnection Agreements signed by federal agency Customers and AMP.

- (A) <u>Insurance</u>. The insurance requirements set forth in Section 4 of the Interconnection Agreement and Section 8 of these General Conditions shall not apply.
- (B) <u>Indemnity and Liability</u>. Section 9 of these General Conditions are deleted in order to comply with the Anti-Deficiency Act, 31 U.S.C. § 1341, prohibiting Federal agencies from executing contracts containing indemnification provisions.
- (C) <u>Governing Law, Venue</u>. Section 10 of these General Conditions shall be replaced and superseded in full with the following:

"In the event that either party brings any action against the other under the Interconnection Agreement or these General Conditions the Parties agree that California law governs and that trial of such action shall be vested exclusively in the state courts of California in the County of Alameda or in the United States

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	District Court for the Northern District of California, except to the extent that the same are determined to be preempted by Federal law."
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