February 23, 2015

Oregon Public Utility Commission
Attn: Filing Center
3930 Fairview Industrial Dr. SE
PO Box 1088
Salem, OR 97308

Docket # UM 1538
Subject: Request for waiver of 12 month solar PV installation requirement according to OAR 860-084-0210

To whom it may concern,

The purpose of this letter is to request an extension of the 12 month installation deadline for the project at 4010 NE Hancock St., Portland, OR 97212. In April 2014, the property owners received notification that Pacific Power had approved their application to participate in the Oregon Solar Incentive Program (see attached email). A capacity reservation of 10.00 kW and incentives were reserved with a start date of April 17, 2014 (tracking number 58967008). The homeowners completed the necessary paperwork within the 60 day deadline.

The project has been delayed for the following reasons:

a. This is a late 19th century building that will require engineering. It is anticipated that the permit will be taken in for a review period before being approved and issued.

b. This is an apartment building that is owned by multiple partners. Communication has been delayed due to the number of people involved in the decision making process. The main point of contact is out of state.

c. Gaining access to the entire building to measure for engineering has been delayed because of scheduling with multiple tenants.

d. Placement of the production meter requires installation behind a dryer which is being relocated.

A 6 month extension is requested. We have received a 50% deposit from the clients and the electrical portion of the system has been designed (see attached electrical schematic). Once engineering has been finalized, we will be able to solidify the design of the array itself and will purchase

Neil Kelly

DESIGN / BUILD REMODELING
HANDYMAN SERVICES
HOME PERFORMANCE
SOLAR
CUSTOM HOMES
CABINETS

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Eugene Design Center
2817 Oak St
Eugene, OR 97405
Phone: 541.683.6085
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Bend Design Center
190 NE Irving Ave
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5959 Corson Ave S, Suite B
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Salem: 503.370.4400
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Toll Free 866.691.2719

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Certified B Corporation

materials. The panels are manufactured at SolarWorld in Hillsboro, so shipping time will be minimal. The racking and other materials are stocked locally as well. The final 50% of the contract price is due upon completion of the project, and the clients are prepared financially.

Thank you for your consideration. If you have any questions, please do not hesitate to contact me directly.

Sincerely,

/s/ Erika Altenhofen

Administrative Assistant
HOME PERFORMANCE | SOLAR

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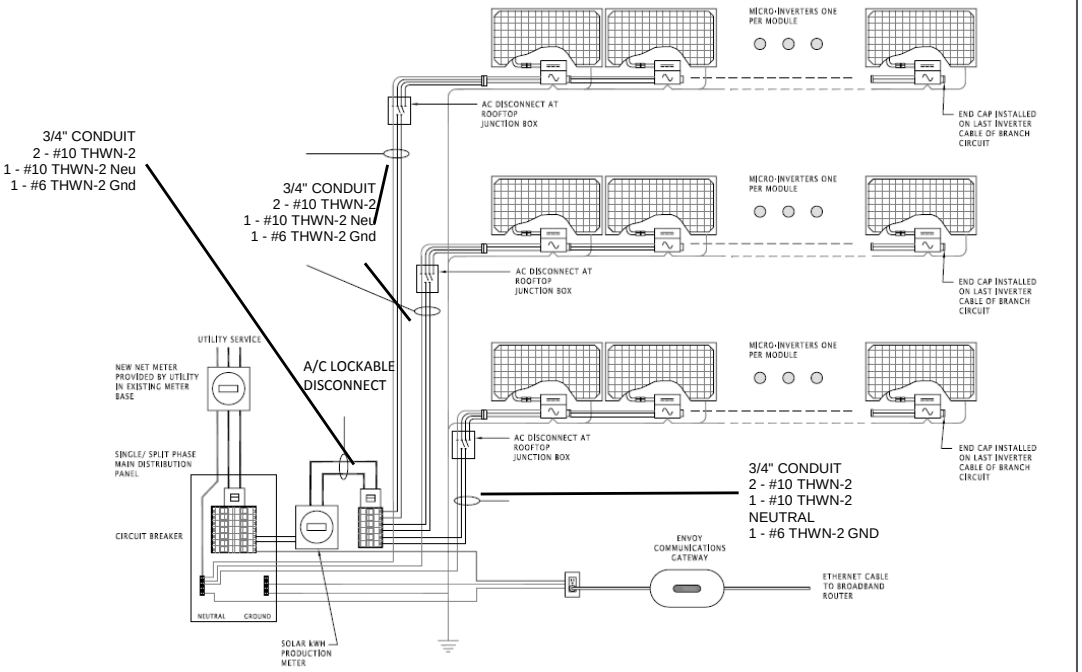
Voltage Drop Calculations							
Formula used per NEC 2008 Handbook 215.2(A)(3): $V_D = 2*R*I*L/1000$							
CIRCUIT LOCATION	**VOLTAGE**	**CURRENT**	**WIRE SIZE**	**RESISTANCE (OHMS PER KFT**	**LENGTH (FT)**	**VOLTAGE DROP**	**VD %**
INVERTER CABLES (SEE NOTE 9)	240V	SEE NOTE 9	SEE NOTE 9	SEE NOTE 9	SEE NOTE 9	0.21 V	0.4%
INVERTERS TO AC COLLECTION-BRANC	240V	11.64A	10	1.29	20	0.60 V	0.3%
INVERTERS TO AC COLLECTION-BRANC	240V	11.64A	10	1.29	20	0.60 V	0.3%
INVERTERS TO AC COLLECTION-BRANC	240V	12.54A	10	1.29	20	0.65 V	0.3%
AC COLLECTION TO BREAKER PANEL	240V	36.00A	8	0.809	30	1.75 V	0.7%
					TOTAL VOLTAGE DROP:		1.9%



WEATHER DATA FROM WEATHER.COM	
WEATHER STATION:	PORTLAND INTL AIRPORT
LOWEST EXPECTED TEMPERATURE	-6.0°C
AVERAGE HOTTEST TEMPERATURE	36.0°C

SYSTEM OVERVIEW	
ARRAY RATED DC POWER OUTPUT @ S	10000W
NUMBER OF MODULES IN ARRAY	40
# OF MODULE PER INVERTER	1
# OF MODULES IN BRANCH CIRCUIT #1	13
# OF MODULES IN BRANCH CIRCUIT #2	13
# OF MODULES IN BRANCH CIRCUIT #3	14

PV MODULE RATINGS @ STC	
MODULE MANUFACTURER	SOLARWORLD
MODULE MODEL #:	SW 250 MONO
RATED MAX POWER OUTPUT	250W
OPEN-CIRCUIT VOLTAGE (Voc)	37.8V
OPERATING VOLTAGE (Vmp)	31.1V
SHORT-CIRCUIT CURRENT (Isc)	8.28A
OPERATING CURRENT (Imp)	8.05A
SERIES FUSE RATING	16A
Voc CORRECTION FACTOR (%/deg C)	-0.33%
Vmp/Pmp CORRECTION FACTOR	-0.45%

NEC 690.53 PHOTOVOLTAIC POWER SOURCE	
OPERATING CURRENT	8.05A
OPERATING VOLTAGE	31.1V
MAXIMUM SYSTEM VOLTAG	41.7V
SHORT CIRCUIT CURRENT	10.4A

LABEL ON AC DISCONNECT BRANCH CIRCUIT #1	
AC OUTPUT CURRENT	11.6A
NOMINAL AC VOLTAGE	240V

LABEL ON AC DISCONNECT BRANCH CIRCUIT #2	
AC OUTPUT CURRENT	11.6A
NOMINAL AC VOLTAGE	240V

LABEL ON AC DISCONNECT BRANCH CIRCUIT #3	
AC OUTPUT CURRENT	11.6A
NOMINAL AC VOLTAGE	240V

INVERTER RATINGS	
MANUFACTURER	ENPHASE
MODEL	M215-60-240-2LL-S22/S23
RATED AC VOLTAGE	240V
CEC WEIGHTED EFFICIENC	96.0%
MAX AC POWER OUTPUT	215W
MAX DC VOLTAGE	45V
MAX DC CURRENT	15A
MIN MPPT INPUT VOLTAGE	22V
MAX MPPT INPUT VOLTAGE	36V
MAX AC CURRENT	0.9A

LOAD CENTER	
MAIN BREAKER SIZ	200
CIRCUIT BREAKER	40
BUSBAR	200

BACKFED CIRCUIT BREAKER
IS READILY ACCESSIBLE

GENERAL NOTES

1) SYSTEM SHALL COMPLY WITH NATIONAL ELECTRIC CODE (NEC)
2) SYSTEM SHALL COMPLY WITH LOCAL, STATE, AND FEDERAL REQUIREMENT
3) ALL COMPONENTS SHALL BE GROUNDED PER NEC REQUIREMENTS
4) ALL EQUIPMENT SHALL BE LISTED PER NEC
5) EACH INVERTER SHALL BE DIRECTLY CONNECTED TO EACH PV MODULE, WITH FACTORY SUPPLIED MODULE LEADS.
6) TYPE THHN/THWN-2 SHALL BE USED WHERE IN CONDUIT
7) THE LINE-TO-LINE AND LINE-TO-NEUTRAL VOLTAGE OF SERVICE ENTRANCE CONDUCTORS SHALL BE MEASURED PRIOR TO SYSTEM ISTALLATION. THE VOLTAGES SHALL BE WITHIN THE FOLLOWING RANGES: L1 TO L2 - 211 TO 264 Vac. L1 OR L2 TO NEUTRAL - 106 TO 132 Vac.
8) INTERCONNECTION SHALL COMPLY WITH NEC ARTICLE 690.64

9) FROM TABLE IN TECHNICAL BRIEF "CALCULATING AC LINE VOLTAGE DROP FOR M215 MICROINVERTERS WITH ENGAGE CABLES" DATED 6/03/11

Mr. Sun Solar
6125 NE PORTLAND HWY
PORTLAND, OR 97218
(503)222-2468
CCB#001663

CUSTOMER: Barker + Calkins Inc.
SITE ADDRESS: 4010 NE Hancock St
PORTLAND, OR 97212

PHOTOVOLTAIC SYSTEM ELECTRICAL SCHEMATIC

SIZE:	DRAWING No	DATE:	REVISION
8.5 X 11	E1.0	#######	

REV	DATE	DESCRIPTION

DRAWN BY: RW
CHECKED BY: JF