



e-FILING REPORT COVER SHEET

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REPORT NAME: Adding a VIR Solar PV system to a Net Metered PGE Account

COMPANY NAME: Elemental Energy on behalf of Asoka Diggs & Kristen Haywood, cust. of PGE

DOES REPORT CONTAIN CONFIDENTIAL INFORMATION? No Yes

If yes, please submit only the cover letter electronically. Submit confidential information as directed in OAR 860-001-0070 or the terms of an applicable protective order.

If known, please select designation: RE (Electric) RG (Gas) RW (Water) RO (Other)

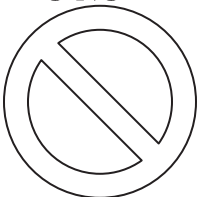
Report is required by: OAR
Statute
Order
Other Homeowner Request to PUC

Is this report associated with a specific docket/case? No Yes

If yes, enter docket number: Docket UM 1538

List applicable Key Words for this report to facilitate electronic search:
PGE VIR, Feed in Tariff, Energy Trust of Oregon, ETO, Residential Solar

DO NOT electronically file with the PUC Filing Center:



- Annual Fee Statement form and payment remittance or
- OUS or RSPF Surcharge form or surcharge remittance or
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- Accident reports required by ORS 654.715

Please file the above reports according to their individual instructions.

May 28, 2013

REQUEST TO OREGON PUBLIC UTILITIES COMMISSION

For Public Hearing Agenda on June 18th, 2013

Adding a VIR Solar PV system to a Net Metered PGE Account

J. Asoka Diggs & Kristin Haywood are the homeowners at 2325 SW Augusta Pl, Aloha, OR 97006. They have an account with Portland General Electric (Account Number: 0006 62649-417638-3). This account was upgraded to a “Net Metered” account in December of 2012. They would like to add an additional and electrically independent PV system under the VIR program through PGE. However, according to a notice they have received, PGE has denied their request. We are asking for an exception, as this possesses neither an engineering impossibility nor undue administrative challenge to the utility.

In Oregon, a residential customer can choose install a solar electric (PV) system under one of two incentive paths. The most common path in the Energy Trust of Oregon (ETO) and Oregon State Residential Energy Tax Credit (RETC). These incentives ‘buy down’ the system cost based on its size, through up-front ‘cash’ rebates and tax credits. The other option is the Volumetric Incentive Rate (VIR), which is a pilot program for PGE and PacificPower customers which pay a premium rate for the homeowner’s solar generated electricity. This type of incentive is commonly referred to as a “feed in tariff.” Since it is a pilot program, enrollment is limited and applications are awarded twice a year – every April 1st and October 1st.

In October 2012, Asoka & Kristin applied for the Volumetric Incentive Rate solar production incentive through their electric provider PGE. Due to the popularity of this program, enrollments are awarded via a lottery system. Their application was not granted, so the couple decided to move on with their solar plans via the ETO/RETC route.

In December, they upgraded their electrical service, installed an electric vehicle charging port and a 3 kW PV array. The size of their PV system was limited due to the financial restrictions of the ETO/RETC option, as well as due to their restricted solar resource on their home due to the large trees in front of the property.

After a collapse of one of the trees during winter, Asoka & Kristin decided to remove the two 150 foot trees in their front yard. A consequence of this, their house now has tremendous solar resource over its entire roof – freeing up the opportunity to add more solar PV.

Now with an opportunity to achieve their original solar goals – a large enough PV system to offset the majority of their energy consumption, plus the added draw of their electric vehicle, Asoka and Kristin reapplied for the VIR on April 1st. Unlike the previous attempt, this application was accepted

(Confirmation number: 06P216). They paid the \$500 deposit and began planning the construction of their 10 kW PV addition.

However, on April 15th, they received a notice from PGE stating that their application had been denied for the following reason: “The Portland General Electric Account Number: 000662649-417638-3 is already enrolled in Net Metering. Per the Oregon Public Utilities Commission, PGE service currently enrolled in Net Metering is not eligible for the Solar Payment Option Pilot Program.”

This was a surprise as their solar integrator, Elemental Energy LLC, had previously installed a VIR PV system for a customer with an existing net-metered system for a homeowner with service from Pacific Power.

We believe the only potential concern with denying such a scenario is the fear from the utility that the customer will feed the outputs of both PV systems through the production meter of the VIR system, in an attempt to “double-dip” on the incentives and claim additional revenue on their net metered system.

However, in the attached electrical schematic, it is clear that each system is entirely independent. Each system has its own production meter, and separate connection point with the grid (located within homeowner’s electric panel).

Ultimately, we believe PGE has not offered any strong evidence as to why the project will present either an engineering impossibility or present an undue administrative hardship. We have demonstrated in the attached electrical wiring diagram a solid engineering solution which clearly shows where the metered data would be collected, verifying that the net metering system will not mistakenly result in false payments under the VIR.

Asoka and Kristin are model customers for the renewable energy/energy efficiency goals of the state and utility. They are taking action to support the goals of the Renewable Portfolio Standards (electricity generated by their VIR system will credit PGEs RPS goals). By adding solar PV they are adding a peak shaving technology, and by adding an electric car they are helping to draw energy from the grid at night. The net effect is load leveling and ultimately beneficial for the utility.

Sincerely,

John Grieser

Owner

Elemental Energy LLC

john@elementalenergy.net

503 967 5786

Submitted on behalf of J. Asoka Diggs & Kristin Haywood

LINE DIAGRAM:

NOTES TO INSTALLER:

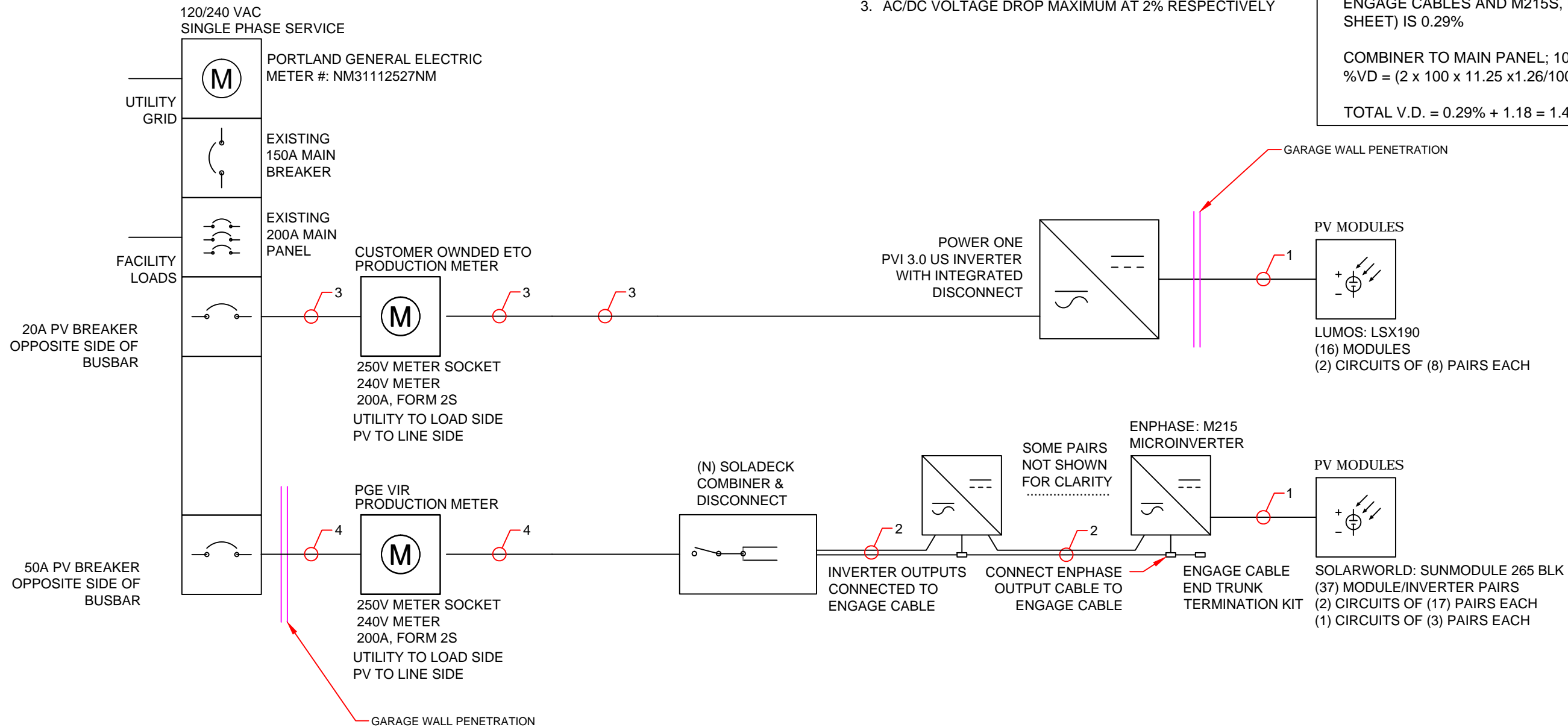
1. UTILITY CONDUCTORS TO LOAD SIDE, BOTTOM
2. PV CONDUCTORS TO LINE SIDE, TOP
3. AC/DC VOLTAGE DROP MAXIMUM AT 2% RESPECTIVELY

VOLTAGE DROP CALCS

DC- MODULES TO COMBINER;
 VOLTAGE DROP FOR 240 VAC, 4 WIRE, 1.0M PORTRAIT
 ENGAGE CABLES AND M215S, END FED (FROM SPEC.
 SHEET) IS 0.29%

COMBINER TO MAIN PANEL; 100ft. MAX:
 $\%VD = (2 \times 100 \times 11.25 \times 1.26 / 1000) / 240 = 1.18\%$

TOTAL V.D. = 0.29% + 1.18% = 1.47%



ELECTRICAL NOTES:

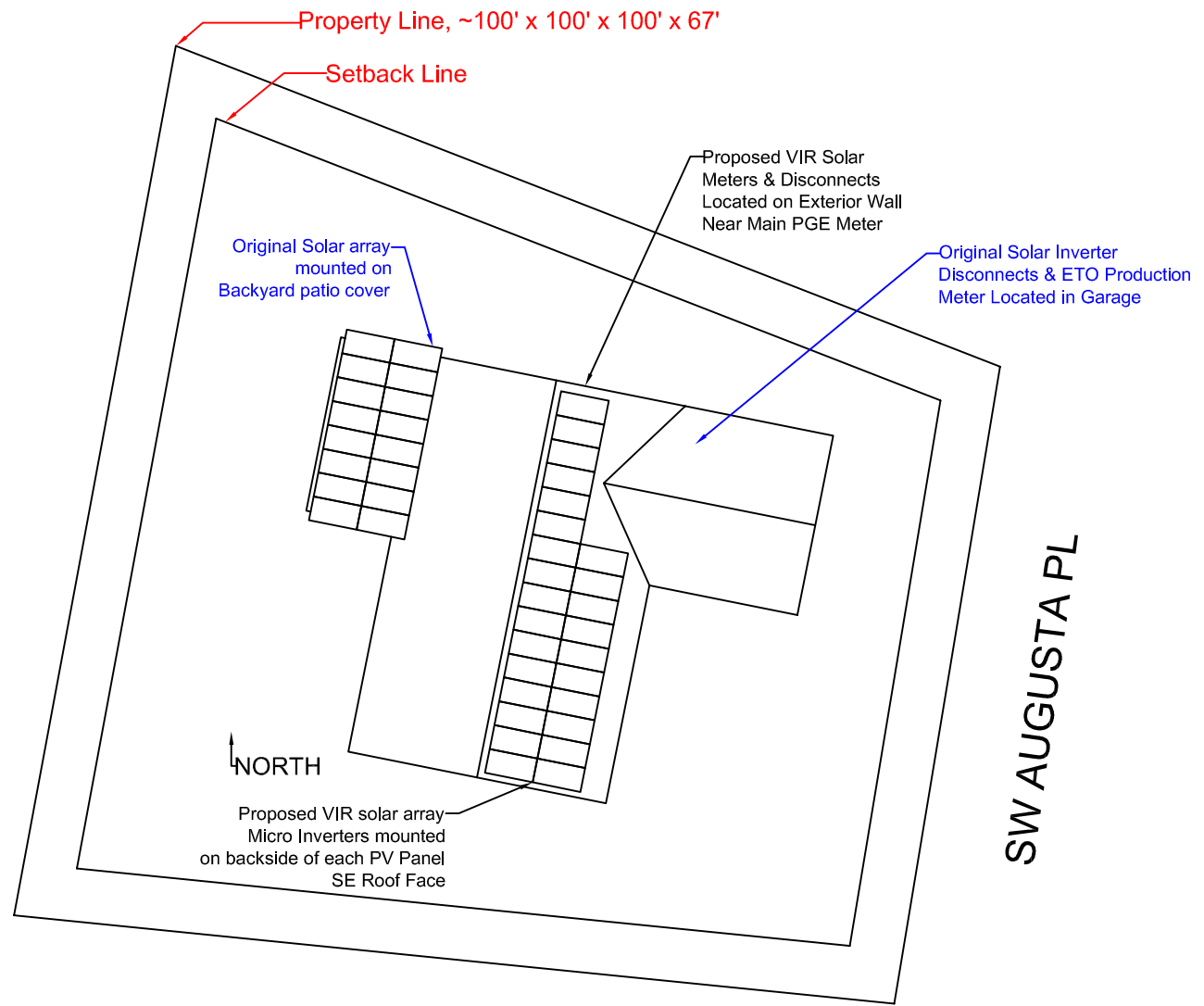
1. PHOTOVOLTAIC SYSTEM WILL COMPLY WITH 2011 NEC.
2. ELECTRICAL SYSTEM GROUNDING WILL COMPLY WITH 2011 NEC.
3. MODULES CONFORM TO AND ARE LISTED UNDER UL 1703.
4. INVERTER CONFORMS TO AND IS LISTED UNDER UL 1741.
5. ARRAY DC CONDUCTORS ARE SIZED FOR DERATED CURRENT.
 8.65 AMPS MODULE SHORT CIRCUIT CURRENT.
 13.49 AMPS DERATED SHORT CIRCUIT CIRCUIT (690.8 (a) & 690.8 (b)).
6. EACH PV SYSTEM IS ELECTRICALLY INDEPENDENT AND SEPERATELY METERED

POINT OF INTERCONNECTION:

- BACKFED BREAKER ON MAIN PANEL**
1. ADD 50 AMP PV BREAKER TO MAIN PANEL
 2. MAIN PANEL RATING: 200 A
 3. MAIN PANEL MAIN BREAKER RATING: 150 A

CONDUIT SCHEDULE

#	CONDUIT	CONDUCTOR	NEUTRAL	GROUND
1	NONE	(2) 10 AWG PV WIRE	NONE	(1) 6 AWG BARE COPPER
2	3/4" EMT OR EQUIV.	ENPHASE ENGAGE CABLE	NONE	(1) 6 AWG THHN/THWN-2
3	3/4" EMT OR EQUIV.	(2) 10 AWG THHN/THWN-2	(1) 10 AWG THHN/THWN-2	(1) 6 AWG THHN/THWN-2
4	3/4" EMT OR EQUIV.	(2) 8 AWG THHN/THWN-2	(1) 8 AWG THHN/THWN-2	(1) 6 AWG BARE COPPER



SITE_PLAN
DIGGS/HAYWOOD_RESIDENCE

2325 SW AUGUSTA PL
ALOHA, OR 97006

SIZE	DATE	DRAWN BY	REV
B	5/28/2013	JOHN_GRIESER	A
SCALE	NTS	SHEET	2