

Building Permit

Solar System Permits

Listed below is the information that needs to be provided to submit a complete application for a **solar system** building permit. Staff will not process incomplete applications.

SUBMITTAL REQUIREMENTS

- Completed and signed building and electrical permit application form, including proof of a valid State Contractor's License and a City of Lynnwood Business License, if applicable.
- Location of all components must be indicated on one or more drawings.
- A satellite picture with the arrays drawn in would be acceptable if the scale of the drawing is legible.
- Cutsheets for all materials being installed is required. Cutsheets for the mounting hardware for mounting the array rails to the roof is required and may only be changed if a revision is submitted prior to installation
- Completed "Review Permit Process for PV Systems" packet, including:
 - Checklist
 - Site Plan
 - Electrical Diagram
 - Specification Sheets
 - Installation Manuals, if available

For City Use Only:

Building Permit Application

Permit Number:		Date Stamp
Associated Permit Number:		

Please read and follow all instructions on your application, submittal checklists and/or applicable supplemental forms carefully. Staff will not process incomplete applications. Please print or type legibly.

Check all that apply:			
<input type="checkbox"/> Residential	<input type="checkbox"/> Commercial / Multi Family	<input type="checkbox"/> Tenant Improvement	<input type="checkbox"/> New Construction
<input type="checkbox"/> Addition	<input type="checkbox"/> Plumbing	<input type="checkbox"/> Mechanical	<input type="checkbox"/> Repair
<input type="checkbox"/> Sign	<input type="checkbox"/> Fire Suppression / Sprinkler	Other:	

<input type="checkbox"/> Demolition	SPCC (Spill Prevention, Control and Countermeasures Plan)
	SWPPP (Storm Water Pollution Prevention Plan)
<p>The SPCC & SWPPP document can be obtained online at https://www.lynnwoodwa.gov/Government/Departments/Public-Works/Environmental-and-Surface-Water-Education-and-Outreach/National-Pollution-Discharge-Elimination-System-NPDES</p>	

Contract Value (Excluding Sales Tax)	\$
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SITE INFORMATION:

Site Address:	
Scope of Work:	

PROPERTY OWNER INFORMATION:

Property Owner(s) Name:	
Address, City, State & Zip:	
Email Address:	
Contact Phone Number:	

TENANT/OCCUPANT INFORMATION:

Tenant/Occupant Name:	
Address, City, State & Zip:	
Email Address:	
Contact Phone Number:	

CONTRACTOR INFORMATION:

Contractor Name:	
Address, City, State & Zip:	
Email Address:	
Contact Phone Number:	
State Contractor's License Number (L&I)	
Unified Business Identifier (UBI) Number:	

PRIMARY CONTACT INFORMATION:

Contact Person Name:	
Address, City, State & Zip:	
Email Address:	
Contact Phone Number:	

ARCHITECT / **ENGINEER INFORMATION:**

Contact Person Name:	
Address, City, State & Zip:	
Email Address:	
Contact Phone Number:	

PLUMBING FIXTURES / CONTRACT VALUE

Fees for single-family or duplex residential buildings are calculated by the number of fixtures. The first 4 fixtures are 175.00 and any fixtures over 4 is \$15.00 per fixture.

Fees for all other buildings, including but not limited to commercial, institutional, or residential complexes of 3 units or more, are all calculated by contract amount.

NOTICE / ACKNOWLEDGEMENT

- I am the owner or the owner's agent and have permission to apply for this permit.
- I am aware that my permit will become null and void if the authorized work has not been inspected within 180 calendar days of issuance or for a period of 180 calendar days from the last inspection.
- I am aware that a one-time extension may be granted if a written request is submitted in writing/email to the building official showing just cause, prior to the expiration date.
- I have read and examined this application and know the information provided to be true and correct.

Print Name of Owner/Agent: _____

Date: _____

Signature of Owner/Agent: _____

Date: _____

For City Use Only:

Permit Number:		Date Stamp
Associated Permit Number:		

Please read and follow all instructions on your application, submittal checklists and/or applicable supplemental forms carefully. Staff will not process incomplete applications. Please print or type legibly.

Please check all that apply:		
<input type="checkbox"/> Residential	<input type="checkbox"/> Commercial	<input type="checkbox"/> Medical, Institutional or School Facility

Please complete as applicable:		
<input type="checkbox"/> New Building _____amps	<input type="checkbox"/> Additional: _____amps	<input type="checkbox"/> Tenant Improvement
<input type="checkbox"/> Temporary Power _____amps	<input type="checkbox"/> Service Change _____amps	<input type="checkbox"/> # of New Circuits _____
<input type="checkbox"/> Limited Low Voltage	<input type="checkbox"/> Portable Classroom / Mobile Home	<input type="checkbox"/> Sign
<input type="checkbox"/> Pool, Hot Tub, Sauna or Spa	<input type="checkbox"/> Carnival - # of Concessions _____	<input type="checkbox"/> Fire Alarm

Contract Value (excluding sales tax)	
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SITE INFORMATION:

Site Address:	
Scope of Work:	

PROPERTY OWNER INFORMATION:

Property Owner(s) Name:	
Address, City, State & Zip:	
Email Address:	
Contact Phone Number:	

OVER THE COUNTER (OTC) COMMERCIAL QUALIFICATION CHECKLIST

Is the occupancy defined as any of the following facilities?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
Hospital	Nursing Home Unit or Long-Term Care Unit		
Ambulatory Surgery Facility	Renal Hemodialysis Clinic		
Boarding Home	Residential Treatment Facility for Psychiatrically		
Assisted Living Facility	Impaired Children and Youth		
Private Psychiatric Hospital	Adult Residential Rehabilitation Center		
Maternity Home	Education Facility		
Institutional Facility	Private Alcoholism Hospital / Alcoholism Treatment Facility		

If you answered “Yes” then will this scope of work include: At least one “Yes” required for OTC

A lighting specific project that results in an electrical load reduction on each feeder involved in the project?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A low voltage system?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A modification to an existing installation where ALL CONDITIONS ARE TRUE: <ul style="list-style-type: none"> Service or distribution equipment involved is rated less than 100 amperes and does not exceed 250v. Does not involve emergency systems other than listed unit equipment per NEC 700.12(F). Does not involve branch circuits or feeders of an essential electrical system as defined in NEC 517.2. 	<input type="checkbox"/> Yes	<input type="checkbox"/> No

If you answered “No” please answer the following questions: All answers must be “No” for OTC

Is this work an installation or alteration to a service feeder rated 100 amperes or greater?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Are more than 100 amperes being added to the service or feeder?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is this a commercial generator installation or alteration?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is all work on the electrical system operating at or over 600 volts?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is 60% or more of luminaires changing and is there an increase in the lighting load?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is this work in an area that has been determined to be a hazardous (classified) location by the NEC?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is this an installation of a switch or circuit breaker rated 400 amperes or more?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is this a solar photovoltaic system?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

NOTICE:

Inaccurate information indicated on this checklist may result in the need for plan review. If upon inspection, it is discovered that your scope of work does not match the work indicated on this worksheet, you may be issued a Stop Work Order and will cease work until plans have been submitted, reviewed, approved, and issued.

TENANT/OCCUPANT INFORMATION:

Tenant/Occupant Name:	
Address, City, State & Zip:	
Email Address:	
Contact Phone Number:	

CONTRACTOR INFORMATION:

Contractor Name:	
Address, City, State & Zip:	
Email Address:	
Contact Phone Number:	
State Contractor's License Number (L&I):	
Unified Business Identifier (UBI) Number:	

PRIMARY CONTACT INFORMATION:

Contact Person Name:	
Address, City, State & Zip:	
Email Address:	
Contact Phone Number:	

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- I am aware that a one-time extension may be granted if a written request is submitted in writing/email to the building official showing just cause, prior to the expiration date.
- I have read and examined this application and know the information provided to be true and correct.

Print Name of Owner/Agent: _____

Date: _____

Signature of Owner/Agent: _____

Date: _____

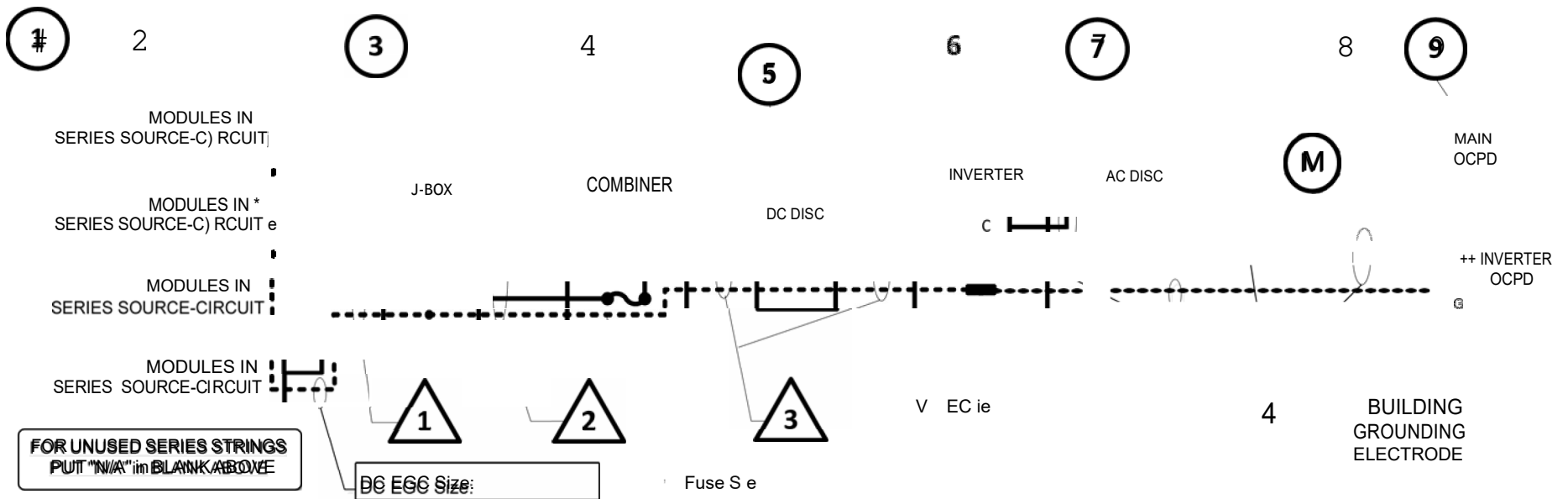
Solar PV Electrical One-Line Diagram Requirements

The electrical one-line diagram must be used to accurately represent the electrical components of the solar PV system and shall include:

- The correct conductor sizing based on the ambient temperature, number of conductors, and distance of conduit off the roof.
 - The correct “Output circuit” conductors sizing from the combiner to the inverter based on the number of strings multiplied by the “Max amps.”
 - Where a combiner box is installed, or where more than two strings of modules are electrically connected together in “parallel,” each individual string shall be protected by its own overcurrent protection device or feeders are for the sum of the short circuit current of all strings. The fuse or breaker shall be listed as being suitable for use in a DC circuit and shall meet or exceed the maximum voltage of the circuit. The rating of the fuse or circuit breaker shall not be larger than the maximum size specified on the lowest rated module in the string.
 - Per NEC Section 690.31(E), metallic raceway and enclosures must be used where DC wiring is installed inside of the house.
 - Grounding on the DC side of the inverter requires a minimum #8 copper grounding electrode conductor run un-spliced from the factory identified system grounding terminal of the inverter to the grounding electrode system of the house.
 - The inverter shall be listed and labeled by a recognized electrical testing laboratory and be identified as “Utility interactive.”
 - Inverter ground fault protection (GFP) shall comply with NEC 690.5.
 - A performance meter and a safety disconnect switch may be required to be installed between the PV power source and the electrical utility equipment. Contact the local serving utility for requirements. Where a performance meter is required by the local utility to record the power produced by the PV system, the output wiring from the inverter shall always connect to the “LINE” side terminals of the meter.
 - Where disconnect switches (with or without fuses) are installed in the circuit from the inverter output terminals to the house electrical panel, the wiring originating at the inverter(s) shall always connect to the “LOAD” side terminals of ANY disconnect that has been installed.
 - The connection to the service panel shall be through a dedicated circuit breaker that connects to the panel bus bars in an approved manner.
 - “Load Side Taps” where the inverter AC wiring does not terminate using a dedicated breaker or set of fuses are prohibited under ANY condition by NEC 690.64(B).
 - The location of the PV backfed breaker must be identified per 690.64(B)(7) with the following verbiage: **“WARNING INVERTER OUTPUT CONNECTION. DO NOT RELOCATE THE OVERCURRENT DEVICE.”**
 - Where it is not possible to locate the PV breakers at opposite ends of the panel bus, the sum of the two PV breakers is not permitted to exceed 100% of the bus rating per NEC 690.64(B)(7)
 - Per NEC 690.53, a permanent label for the DC power source shall be installed at the PV DC disconnecting means. This label shall show the following:
 - Rated maximum power-point current.
 - Rated maximum power-point voltage.
 - Maximum system voltage.
 - Short circuit current of the PV system.
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TAG	EQUIPMENT SCHEDULE			
1	SOLAR PV MODULE	MAKE:	MODEL:	(Attach Cut Sheet - See notes for ratings)
2	PV ARRAY	WEIGHT:	HEIGHT FROM ROOF:	(Attach cut sheet of mounting system)
3	J-BOX	LENGTH	WIDTH:	HEIGHT. NEMA RATING.
4	COMBINER	MAKE	MODEL:	(Attach cut sheet)
5	DC DISCONNECT	VDC	DC AMP:	MAKE.
6	DC/AC INVERTER	MAKE:	(Attach cut sheet - See notes for ratings)	
7	AC DISCONNECT	VAC:	AMPS:	MODEL:
8	PRODUCTION METER	METER #:	(Check with serving utility for meter requirements & location)	
9	SERVICE PANEL	VAC:	MAIN OCPD:	BUS AMP: INVERTER OCPD:

Contractor - Installer Information	
Permit #:	Date:
Name:	
Address:	
Contact Name:	
Contact Phone:	
Email:	



Conductor Insulation Type	CU/AL	Conductor		"De-rated" AmQS	Raceway		Ambient Temp		Distance off Roof
		Size	Type		Roof	Attic			
1									
2									
3									
4									

A Note. Derating of conductors based on number of conductors in raceway, ambient temp and distance off roof where applicable. (NEC 370, T5/ ++ Note. Conductors and overcurrent devices shall be sized to carry not less than 125 percent of the maximum current. (NEC 690.BAB))

Standard Electrical Diagram - Residential Small Scale PV System Central Inverter Systems

THIS PLAN MUST BE PROVIDED TO THE INSPECTOR AT THE JOB SITE

Site Name: _____

Site Address: _____

This plan is NOT intended to be used with micro inverters or transformer-less inverters. Conductors, where installed outdoors in raceways shall be "W" rated and have an insulation rating of 90 deg C.

Rev - 02/2 1/2013

NOTES for Residential Small Scale PV System Electrical Diagram

Permit #:	Date:
Contractor:	
Job Address:	
Contact Name:	
Contact Phone:	

SIGNS

SIGN FOR DC DISCONNECT	
PHOTOVOLTAIC POWER SOURCE	
RATED MPP CURRENT	A
RATED MPP VOLTAGE	V
MAX SYSTEM VOLTAGE	V
MAX CIRCUIT CURRENT	A
WARNING! ELECTRICAL SHOCK HAZARD—LINE AND LOAD MAY BE ENERGIZED IN OPEN POSITION	
SIGN FOR INVERTER OCPD AND AC DISCONNECT (IF USED)	
SOLAR PV SYSTEM AC POINT OF CONNECTION	
AC OUTPUT CURRENT	A
NOMINAL AC VOLTAGE	V
THIS PANEL FED BY MULTIPLE SOURCES (UTILITY AND SOLAR)	

PV MODULE RATINGS

MODULE MAKE	
MODULE MODEL	
MAX POWER-POINT CURRENT (I _p)	A
MAX POWER-POINT VOLTAGE (V _{mp})	V
OPEN-CIRCUIT VOLTAGE (V _{oc})	V
SHORT-CIRCUIT CURRENT (I _{sc})	A
MAX SERIES FUSE (OCPD)	A
MAXIMUM POWER (P _m)	W
MAX VOLTAGE (TYP 600V _{dc})	V
VOC TEMP COEFF (mV/°Cp or °A/°C p)	
IF COEFF SUPPLIED, CIRCLE UNITS	

INVERTER RATINGS

INVERTER MAKE	
INVERTER MODEL	
MAX DC VOLT RATING	V
MAX POWER @ 40°C	W
NOMINAL AC VOLTAGE	V
MAX AC CURRENT	A
MAX OCPD RATING	A

LOWEST EXPECTED AMBIENT TEMP:	°C
HIGHEST CONTINUOUS TEMPERATURE:	°C

NEC 690.8(B) Photovoltaic system currents shall be considered continuous.

NEC 690.8(B)(1) The circuit conductors and overcurrent devices shall be sized to carry not less than 125 percent of the maximum currents calculated in 690.8(A).

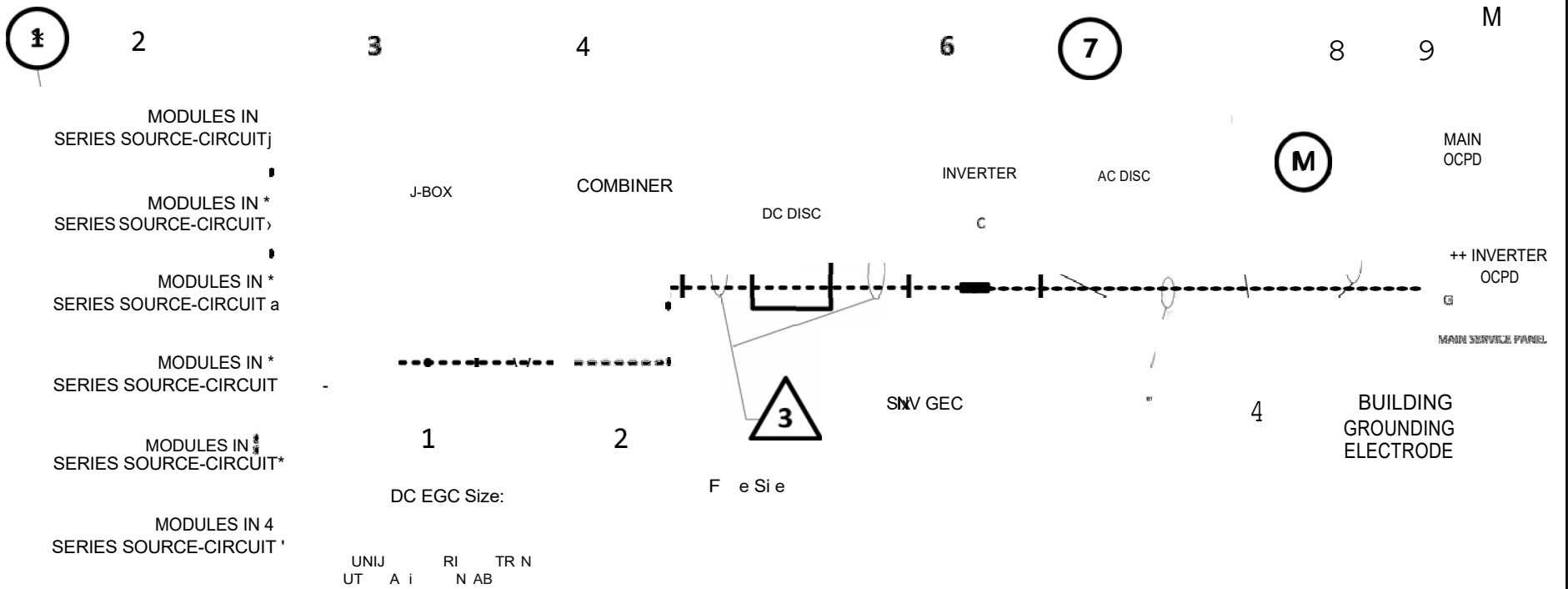
Exception. Circuits containing an assembly, together with its overcurrent device(s), that is listed for continuous operation at 100 percent of its rating shall be permitted to be utilized at 100 percent of its rating.

All signage and markings shall be a phenolic or metallic plate or other similar material in block letters 1/4 inch or greater in height, and suitable for the environment. Letters and background shall be in contrasting colors. Screws, rivets or other approved means shall be used to affix plates to equipment.

INVERTER		PANELBOARD	
Maximum Current	oCPD Size	Main Bus	Main OCPD
56 amps	70 amps	225 amps	200 amps
30 amps	45 amps	225 amps	225 amps
33 amps	40 amps	200 amps	200 amps
24 amps	30 amps	150 amps	150 amps
20 amps	25 amps	125 amps	125 amps
16 amps	20 amps	100 amps	100 amps

TAG	EQUIPMENT SCHEDULE				
1	SOLAR PV MODULE	MAKE:	MODEL:	(Attach Cut Sheet - See notes for ratings)	
2	PV ARRAY	WEIGHT:	HEIGHT FROM ROOF:	(Attach cut sheet of mounting system)	
3	J-BOX	LENGTH:	WIDTH:	HEIGHT:	NEMA RATING:
4	COMBINER	MAKE:	MODEL:	(Attach cut sheet)	
5	DC DISCONNECT	VDC:	DC AMP:	MAKE:	
6	DC/AC INVERTER	MAKE:	(Attach cut sheet - See notes for ratings)		
7	AC DISCONNECT	VAC:	AMPS:	MODEL:	
8	PRODUCTION METER	METER #:	(Check with serving utility for meter requirements & location)		
9	SERVICE PANEL	VAC:	MAIN OCPD:	BUS AMP:	INVERTER OCPD:

Contractor - Installer Information	
Permit #:	Date:
Name:	
Address:	
Contact Name:	
Contact Phone:	
Email:	



Conductor Insulation Type	CU/AL	Conductor Size			Derated	Raceway		Ambient Temp		Distance
		Size	Amp	Min		Size	Type	Roof	Attic	
1										
2										
3										
4										

* Note. Derate conductors based on number of conductors in raceway, ambient temperature and distance to roof where applicable. (NEC 310.15)
 ** Note. Conductors and overcurrent devices shall be sized to carry not less than 125 percent of the maximum currents. (NEC 690.8(B))

Standard Electrical Diagram - Residential Small Scale PV System Central Inverter Systems

THIS PLAN MUST BE PROVIDED TO THE INSPECTOR AT THE JOB SITE

Site Name:

Site Address:

This plan is NOT intended to be used with micro inverters or transformer-less inverters. Conductors, where installed outdoors in raceways shall be "W" rated and have an insulation rating of 90 deg C.

Rev - 02/23/2013

NOTES for Residential Small Scale PV System Electrical Diagram

Permit #:	Date:
Contractor:	
Job Address:	
Contact Name:	
Contact Phone:	

SIGNS

SIGN FOR DC DISCONNECT	
PHOTOVOLTAIC POWER SOURCE	
RATED MPP CURRENT	A
RATED MPP VOLTAGE	V
MAX SYSTEM VOLTAGE	V
MAX CIRCUIT CURRENT	A
WARNING! ELECTRICAL SHOCK HAZARD—LINE AND LOAD MAY BE ENERGIZED IN OPEN POSITION	
SIGN FOR INVERTER OCPD AND AC DISCONNECT (IF USED)	
SOLAR PV SYSTEM AC POINT OF CONNECTION	
AC OUTPUT CURRENT	A
NOMINAL AC VOLTAGE	V
THIS PANEL FED BY MULTIPLE SOURCES (UTILITY AND SOLAR)	

PV MODULE RATINGS

MODULE MAKE	
MODULE MODEL	
MAX POWER-POINT CURRENT (I _p)	A
MAX POWER-POINT VOLTAGE (V _{mp})	V
OPEN-CIRCUIT VOLTAGE (V _{oc})	V
SHORT-CIRCUIT CURRENT (I _{sc})	A
MAX SERIES FUSE (OCPD)	A
MAXIMUM POWER (P _{max})	W
MAX VOLTAGE (TYP 600V _{dc})	V
VOC TEMP COEFF (mV/°Cp or °A/°C p)	
IF COEFF SUPPLIED, CIRCLE UNITS	

INVERTER RATINGS

INVERTER MAKE	
INVERTER MODEL	
MAX DC VOLT RATING	V
MAX POWER @ 40°C	W
NOMINAL AC VOLTAGE	V
MAX AC CURRENT	A
MAX OCPD RATING	A

LOWEST EXPECTED AMBIENT TEMP:	°C
HIGHEST CONTINUOUS TEMPERATURE:	°C

NEC 690.8(B) Photovoltaic system currents shall be considered continuous.

NEC 690.8(B)(1) The circuit conductors and overcurrent devices shall be sized to carry not less than 125 percent of the maximum currents calculated in 690.8(A).

Exception. Circuits containing an assembly, together with its overcurrent device(s), that is listed for continuous operation at 100 percent of its rating shall be permitted to be utilized at 100 percent of its rating.

All signage and markings shall be a phenolic or metallic plate or other similar material in block letters 1/4 inch or greater in height, and suitable for the environment. Letters and background shall be in contrasting colors. Screws, rivets or other approved means shall be used to affix plates to equipment.

INVERTER		PANELBOARD	
Maximum Current	oCPD Size	Main Bus	Main OCPD
56 amps	70 amps	225 amps	200 amps
30 amps	45 amps	225 amps	225 amps
33 amps	40 amps	200 amps	200 amps
24 amps	30 amps	150 amps	150 amps
20 amps	25 amps	125 amps	125 amps
16 amps	20 amps	100 amps	100 amps

SITE PLAN RESIDENTIAL SMALL SCALE PV SYSTEM		Provide roof outline with location of all PV panels, j-box, combined and DC disconnect. If required, show fire code access pathways.	
Permit é:	Date:	Contractor:	Contrator Phane:
Job Address:		Contact Name:	Contact Phone: