RESIDENTIAL SOLAR ROOF TOP EXPEDITED PERMITTING GUIDELINE. 10 KW OR LESS

INFORMATION GUIDELINE

24A

May 2015

CITY OF ESCONDIDO • BUILDING DIVISION • 201 N. BROADWAY, ESCONDIDO, CA 92025 • (760) 839-4647

Plan Submittal Documents

Complete the attached permit application form and attached solar eligibility checklist. Complete a standard electrical plan or provide an electrical single line drawing. The completed checklist, electrical plan and specification sheets will allow for an expedited plan review.

Two complete sets of plans consisting of the Plot Plan, Roof plan with Array and equipment location, Array support and bonding, equipment manufacturer specification sheets and listing approvals and design drawings.

Basic Plan Check information

- Provide a roof plan showing the PV module layout, and the following fire safety items: approximate location of roof access points, location of State Fire Marshal code-complaint fire access pathways, PV system fire classification and the location of all required placards and markings.
- Show the location of all electrical disconnects and electrical panels and equipment.
- Provide at least two copies of the manufacturer's information for cells, modules, inverters, optimizers, monitoring meters and module support systems. Include all information such as UL listing components or a nationally recognized testing agency for specific associated devices.
- Specify the module bonding device and listing approval. Verify compatibility of the device with the modules and module support system.
- Include an equipment ground sized per NEC Table 250-122 and a minimum # 8 grounding electrode conductor from the grounding electrode to the array.

Plan review

- Permit applications must be submitted to the Building Department in person.
- Permit applications utilizing the Eligibility Checklist will have their permit expedited.
- Plan review fees are due at the time of plan submittal.
- Attach the Checklist 24B and Guideline 24A to the plans and equipment specifications.

Fees

- Plan review fee $86.00
- Building Fee $86.00

- Electrical Fee $40.00 (without panel upgrade)

Inspections

Once permits have been issued and the system has been installed, it must be inspected before final approval is granted. On-site inspection can be scheduled by calling 760-839-4646. Inspection request received by 7am the day of the requested inspection will normally receive inspection the same day.

Permit holders must be prepared to show conformance with all technical requirements in the field at the time of inspection. Approved plans and inspection card must be on site for the inspector. An OSHA approved ladder must be provided for access to the roof. The inspector will verify that the installation is in conformance with the applicable codes and approved plans. See the following checklist for common points of inspection that the applicant should be prepared to show compliance:

- Number of PV modules and model number match plans and specification sheets.
- Array conductors and components are installed and supported per current code.
- PV array is properly grounded as demonstrated on the plans.
- Electrical boxes are accessible and connections are suitable for the environment.
- Array is fastened, sealed and supported according to the plans and details.
- Conductors and conduit size and ratings match the approved plans.
- All appropriate placards are installed and displayed.
- Equipment ratings and listings match the approved plans.
- The main electrical service is properly connected to the grounding electrode.
- Inverter has a rating as high as max voltage on PV power source sign.
- DC-side overcurrent circuit protection devices are DC rated at least as high as max voltage on sign.
- Switches and OCPD"s are installed according to the manufacturer's specifications.
- Sum of the OCPD's and the inverter OCPD is rated for not more than 120%of the bus bar rating of the main service.
- When applying the 120% PV OCPD rule, the main electrical panel is not a center fed panel.
- Required placards for main electrical panels that are de-rated when applying the 120% PV OCPD rule.

Filename: Guideline #24 (01-14).doc
Directory: C:\Users\rseraile\Desktop
Template:
C:\Users\rseraile\AppData\Roaming\Microsoft\Templates\Normal.dotm
Title:
Subject:
Author: Janet O. Snider
Keywords:
Comments:
Creation Date: 2/3/2015 2:50:00 PM
Change Number: 33
Last Saved On: 5/5/2015 7:26:00 AM
Last Saved By: Employee
Total Editing Time: 205 Minutes
Last Printed On: 5/12/2015 12:52:00 PM
As of Last Complete Printing
Number of Pages: 3
Number of Words: 626 (approx.)
Number of Characters: 3,570 (approx.)

ELIGIBILTY CHECKLIST FOR EXPEDITED RESIDENTIAL SOLAR PHOTOVOLTAIC PERMITTING

INFORMATION GUIDELINE

24B

May 2015

CITY OF ESCONDIDO • BUILDING DIVISION • 201 N. BROADWAY, ESCONDIDO, CA 92025 • (760) 839-4647

Complete this Eligibility Checklist, the permit application and standard electrical plan or provided an electrical single line drawing along with the manufacturer's specification sheets and the project will qualify for an expedited plan review. See Information Guideline # 24A for plan review and inspection requirements.

ADDRESS: _____PERMIT NUMBER_____

GENERAL REQUIREMENTS

A. System size is 10 kw rating or less. ☐Y ☐N

B. The solar array is roof mounted on a one or two family dwelling. ☐Y ☐N

C. The solar panel/array will not exceed the maximum legal building height. ☐Y ☐N

D. Solar system is utility interactive and without storage batteries. ☐Y ☐N

E. Permit application is complete and attached. ☐Y ☐N

ELECTRICAL REQUIREMENTS

A. No more than 4 module strings are connected to the system. ☐Y ☐N

B. No more than 2 inverters or micro inverters are utilized in the system. ☐Y ☐N

C. The PV system is interconnected to a single-phase AC service panel of nominal 120/220 Vac with bus bar rating of 225 amps or less. ☐Y ☐N

D. The PV system is connected to the load side of the utility distribution equipment. ☐Y ☐N

E. A Solar PV Standard Plan or electrical single line drawing and supporting documentation is completed and attached ☐Y ☐N

F. A minimum # 8 grounding electrode conductor from the grounding to the array and an equipment ground sized per NEC Table 250.122. ☐Y ☐N

G. A listed module bonding device or a device compatible with the modules and module support system is installed. ☐Y ☐N

H. A grounding electrode exist or 2 additional electrodes a minimum of 6' apart. ☐Y ☐N

I. The electrical panel has not been de-rated. ☐Y ☐N

STRUCTURAL REQUIREMENTS

A. Complete structural calculations and details are attached. (If required) ☐Y ☐N

B. Is the roof a single roof without reroof overlay? ☐Y ☐N

C. Does the roof structure appear structural sound, without signs of alteration or deterioration or sagging? ☐Y ☐N

D. Modules do not overhang any roof edge. ☐Y ☐N

E. A roof plan and anchor layout is attached. ☐Y ☐N

FIRE SAFETY REQUIREMENTS

A. Clear access pathways provided ☐Y ☐N

B. Verification of fire classification for the solar modules and support system is provided. ☐Y ☐N

C. All required markings, labels and placards are provided. ☐Y ☐N

D. Solar system is utility interactive and without storage batteries. ☐Y ☐N

E. A diagram of the roof layout of all panels, modules, access pathways and locations of the electrical disconnecting means and all associated equipment is shown. ☐Y ☐N

Notes:

1. These criteria are intended for expedited solar permitting process.
2. If any items are checked "**NO,"** revise the design to fit within the Eligibility Checklist, otherwise permit application may go through the standard process.

Filename: Guideline #24B.docx
Directory: C:\Users\rseraile\Desktop
Template:
C:\Users\rseraile\AppData\Roaming\Microsoft\Templates\Normal.dotm
Title:
Subject:
Author: Diana Lecca
Keywords:
Comments:
Creation Date: 5/4/2015 2:04:00 PM
Change Number: 4
Last Saved On: 5/6/2015 10:04:00 AM
Last Saved By: Employee
Total Editing Time: 0 Minutes
Last Printed On: 5/12/2015 12:53:00 PM
As of Last Complete Printing
Number of Pages: 2
Number of Words: 459 (approx.)
Number of Characters: 2,619 (approx.)