RULE-MAKING ORDER

CR-103P (May 2009) (Implements RCW 34.05.360)

Agency: State Building Code Council

Agency. State Building Sout Souries	Permanent Rule Only
be stated below) Any other findings required by other provisions of law as precondi	ecific finding under RCW 34.05.380(3) is required and should tion to adoption or effectiveness of rule?
☐ Yes ☑ No If Yes, explain:	
Purpose: Adopts changes to the Washington State Fire Code/WAC 51-54A Section Previously, this section of the 2012 ICC Fire Code was not adopted by Variety regulations related to the installation, marking and location of Solar Photos	Washington State. This section is amended to specify
Citation of existing rules affected by this order: Repealed: Amended: WAC 51-54A-0605 Suspended:	
Statutory authority for adoption: RCW 19.27.A	
Other authority: RCW 34.05	"
PERMANENT RULE (Including Expedited Rule Making) Adopted under notice filed as WSR 13-15-164 Describe any changes other than editing from proposed to adopted	on July 23, 2013 (date). version:
Only amended sections of the code are filed herein as state amendmen published in the 2012 ICC International Fire Code.	ts; all other portions of Section 605.11 remain as
Section 605.11.3 Access and pathways, is clarified to include both exce Section 605.11.3.2 Residential systems for one- and two-family dwelling exception now applies to roofs where the solar array does not exceed 3 the solar array is limited to 1,000 sq. ft. or less, and where there is an urany horizontal ridge.	gs, was amended to modify exception #5. This 3 percent of the roof as measured in plan view, where
If a preliminary cost-benefit analysis was prepared under RCW 34.0 contacting:	05.328, a final cost-benefit analysis is available by
Name:Joanne T. McCaughan phone (360) 41 Address:PO Box 41449, Olympia WA fax (360) 58 98504 e-mail joanne.	
Date adopted: November 8, 2013	CODE REVISER USE ONLY
NAME (TYPE OR PRINT) Ray Allshouse	OFFICE OF THE CODE REVISER STATE OF WASHINGTON FILED
SIGNATURE CRASOLINE	DATE: December 02, 2013 TIME: 11:24 AM
Council Chair	WSR 13-24-076

Note: If any category is left blank, it will be calculated as zero. No descriptive text.

Count by whole WAC sections only, from the WAC number through the history note.

A section may be counted in more than one category.

The number of sections adopted in or	der to co	mply with:				
Federal statute:	New		Amended		Repealed	
Federal rules or standards:	New		Amended		Repealed	
Recently enacted state statutes:	New		Amended		Repealed	
The number of sections adopted at th	e reques	t of a nongo	vernmental e	entity:		
	New		Amended		Repealed	
The number of sections adopted in th	a agancı	ı'e own initi:	ativo:			
The number of sections adopted in th	e agency	/ S OWN IMU	ative:			
	New		Amended	<u>1</u>	Repealed	
The number of sections adopted in or	der to cl	arify, stream	iline, or refor	m agency p	rocedures:	
	New		Amended		Repealed	
The number of sections adopted usin	g:					
Negotiated rule making:	New		Amended		Repealed	
Pilot rule making:	New		Amended		Repealed	
Other alternative rule making:	New		Amended		Repealed	

AMENDATORY SECTION (Amending WSR 13-04-063, filed 2/1/13, effective 7/1/13)

WAC 51-54A-0605 Electrical equipment, wiring and hazards.

605.11 Solar photovoltaic power systems. ((This section is not adopted.)) Installation, modification, or alteration of solar photovoltaic power systems shall comply with this section. Due to the emerging technologies in the solar photovoltaic industry, it is understood fire code officials may need to amend prescriptive requirements of section to meet the requirements for firefighter access and product installations. Section 104.9 Alternative materials and methods of this <u>code shall be considered when approving the installation of solar pho-</u> tovoltaic power systems. Solar photovoltaic power systems shall be installed in accordance with Sections 605.11.1 through 605.11.4, ternational Building Code and NFPA 70.

EXCEPTION: Detached, nonhabitable Group U structures shall not be subject to the requirements of Sections 605,11.2 through 605,11.3.3.3.

- 605.11.1.2 Marking content. The marking shall contain the words "PHOTO-VOLTAIC POWER SOURCE."
- 605.11.2 Locations of DC conductors. Conduit, wiring systems, raceways for photovoltaic circuits shall be located as close as possible to the ridge or hip or valley and from the hip or valley as directly as possible to an outside wall to reduce trip hazards and maximize ventilation opportunities. Conduit runs between sub arrays and to DC combiner boxes shall be installed in a manner that minimizes the total amount of conduit on the roof by taking the shortest path from the array to the DC combiner box. The DC combiner boxes shall be locasuch that conduit runs are minimized in the pathways between ar-DC wiring shall be installed in metallic conduit when located within enclosed spaces in a building.
- 605.11.3 Access and pathways. Roof access, pathways, and spacing quirements shall be provided in accordance with Sections 605.11 through 605.11.3.3.3.

EXCEPTIONS:

- 1. Residential structures shall be designed so that each photovoltaic array is no greater than 150 feet (45,720 mm) by 150 feet (45,720
- mm) in either axis.

 2. Panels/modules shall be located up to the roof ridge where an alternative ventilation method approved by the fire code official has determined vertical ventilation techniques will not be employed.
- 605.11.3.2 Residential systems for one- and two-family dwellings. Access to residential systems for one- and two-family dwellings shall be provided in accordance with Sections 605.11.3.2.1 through 605.11.3.2.4.

EXCEPTIONS:

- 1. Residential dwellings with an approved automatic fire sprinkler system installed.
- Residential dwellings with approved mechanical or passive ventilation systems.
 Where the tire code official determines that the slope of the roof is too steep for emergency access.
- 4. Where the fire code official determines that vertical ventilation factics will not be utilized.

 5. These requirements shall not apply to roofs where the total combined area of the solar array does not exceed thirty-three percent as measured in plan view of the total roof area of the structure, where the solar array will measure 1,000 sq. ft. or less in area, and where a minimum eighteen inches unobstructed pathway shall be maintained along each side of any horizontal ridge.
- 605.11.3.2.3 Residential buildings with roof hips and valleys. modules installed on residential buildings with roof hips and valleys shall be located no closer than 18 inches (457 mm) to a hip or a valley where panels/modules are to be placed on both sides of a hip or valley. Where panels are to be located on only one side of a hip or valley, the panels shall be permitted to be placed directly adjacent to the hip or valley.

EXCEPTION: These requirements shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.

- 605.11.3.2.4 Residential building smoke ventilation. Panels/modules installed on residential buildings shall be located no higher than 18 inches (457 mm) below the ridge in order to allow for fire department rooftop operations.
- 605.11.4 Ground-mounted photovoltaic arrays. Ground-mounted photovoltaic arrays shall comply with Sections 605.11 through 605.11.2 and this section. Setback requirements shall not apply to ground-mounted, free-standing photovoltaic arrays.