DOCKETED	
Docket Number:	18-BSTD-02
Project Title:	2019 ENERGY CODE COMPLIANCE MANUALS
TN #:	232774-6
Document Title:	2019-CF1R-ENV-02-E-AreaWeightedAverageWorkSheetpdf
Description:	N/A
Filer:	Corrine Fishman
Organization:	California Energy Commission
Submitter Role:	Public Agency
Submission Date:	4/17/2020 12:03:41 PM
Docketed Date:	4/17/2020

AREA WEIGHTED AVERAGE CALCULATION WORKSHEET

CERTIFICATE OF COMPLIANCE	CF1R-ENV-02-E
Area Weighted Average Calculation Worksheet	(Page 1 of 2)
Project Name:	Date Prepared:

A. Area-Weighted Average Calculation		
01	Project Name:	
02	Dwelling Name or Number:	
03	Feature Being Area Weighted Averaged:	
04	Property Being Averaged:	

B. U-factor Area-Weighted Average Calculation			
01		02	03
Tag /Identification		Surface Feature Area (ft^2)	U-Factor Value
04	U-Factor Area-Weighted Average:		

C. SHGC Area-Weighted Average Calculation			
01		02	03
Tag /Identification		Surface Feature Area (ft^2)	SHGC Value
04	SHGC Area-Weighted Average:		

AREA WEIGHTED AVERAGE CALCULATION WORKSHEET

CERTIFICATE OF COMPLIANCE	CF1R-ENV-02-E
Area Weighted Average Calculation Worksheet	(Page 2 of 2)
Project Name:	Date Prepared:

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
1. I certify that this Certificate of Compliance documentation is accurate and complete.	
Documentation Author Name:	Documentation Author Signature:
Company:	Signature Date:
Address:	CEA/HERS Certification Identification (if applicable):
City/State/Zip:	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. That the energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Responsible Designer Signature:
Company:	Date Signed:
Address:	License:
City/State/Zip:	Phone:

CF1R-ENV-02-E User Instructions

This worksheet is used to calculate the area-weighted average U-factors for building envelope features such as walls, roofs, floors, mass, and fenestration/glazing U-factors or Solar Heat Gain Coefficient (SHGC) values for prescriptive compliance. R-values are not used for area-weighing; only U-factors or SHGC values are allowed.

The area weighted averaging calculation is done when there is more than one level of insulation, window U-factor or SHGC used in a building to meet prescriptive compliance requirements. Each fenestration type (e.g., vertical windows, skylights, dynamic glazing, and window films) is treated independently and cannot be combined. Submit the ENV-02 with the energy compliance documents.

If exterior shading devices are used to meet an SHGC requirement, first complete a CF1R-ENV-03 form (Solar Heat Gain Coefficient (SHGC) Worksheet). If the SHGC exceeds 0.25, then use the weighted-average of other like windows to determine overall compliance with prescriptive SHGC requirements.

A. Area Weighted Average – General Information

1. Project Name: From the CF1R
2. Dwelling Name or Number: From the CF1R
3. Feature Being Area-Weighted Averaged: Indicate what is being area weighted: Fenestration, Wall, Roof, Ceiling or Floors.
4. Property Being Averaged: Indicate if the area-weighted average is for a U-factor, SHGC or Both.

B. U-factor Area Weighted Average Calculation

1. Tag/ID: Same data given on CF1R's; provides an identification Tag or Identification name that uniquely identifies the features being area-weighted.
2. Surface Feature Area: Total area of each occurrence of the feature being area-weighted.
3. U-Factor Value: U-factor of the area described in this row. Values can come from the 2016 Reference Appendices, manufacturer's data or specification sheets.
4. Calculated value; not a user input.

C. SHGC Area Weighted Average Calculation

1. Tag/ID: Same data given on CF1R's; provides an identification Tag or Identification name that uniquely identifies the features being area-weighted.
2. Surface Feature Area: Total area of each fenestration being area-weighted.
3. Property being averaged: Value: SHGC of the area being described in this row. Values can come from the 2016 Reference Appendices, manufacturer's data or specification sheet.
4. Calculated value; not a user input.