

# AREA WEIGHTED AVERAGE CALCULATION WORKSHEET



CERTIFICATE OF COMPLIANCE		NRCC-ENV-06-E
Area Weighted Average Calculation Worksheet		(Page 1 of 3)
Project Name:	Date Prepared:	

This worksheet is used to calculate the area-weighted average values for a building envelope features such as, walls, roofs, floors, mass, and fenestration/glazing U-factors, F-factor, Relative Solar Heat Gain Coefficient (RSHGC) or Visible Transmittance (VT) for the prescriptive compliance approach. R-values can never be area-weighted. Only U-factors, SHGC, RSHGC or VT can be used. When a window has an overhang, calculate the RSHGC first (see Equation 140.3-A), then determine the weighted average if need be.

Weighted averaging is used when there is more than one level of insulation or more than one type of fenestration which would not meet prescriptive compliance requirements. Weighted averaging is not allowed for chromogenic glazing.

A. Envelope Area-Weighted Average Calculation			
01 Tag /Identification	02 Surface Feature Area (ft <sup>2</sup> )	03 Proposed U-factor	04 Area * U-factor
<b>Total</b>			
Proposed Area-Weighted Average U-factor =			

1. Area weighting is only allowable for like surfaces. You may for example area weight two roof assemblies but not a roof and a wall.
2. "Area" can be replaced throughout the formula by "Length" or any other unit of measure used for the value being averaged. Mixture of different units not allowed.
3. Enter the above Weighted Average Value on the NRCC-ENV-01-E and NRCC-ENV-02-E compliance document and attach this sheet.

B. Required and Proposed Area-Weighted Average Fenestration U-factor						
01 Tag/ Identification	02 Fenestration Type	03 Surface Feature Area (ft <sup>2</sup> )	04 Required U- Factor (From Table 140.3-B)	05 Required Area * U-Factor	06 Proposed U-factor	07 Proposed Area * U-factor
<b>Total</b>						
Required Area-Weighted Average U-factor =						
Proposed Area-Weighted Average U-factor =						

*Note: If the **proposed** U-value is **less than or equal to** the **required** U- value, then the windows meet the prescriptive U-value requirement.*

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### C. Required and Proposed Area-Weighted Average Fenestration SHGC

01	02	03	04	05	06	07
Tag/ Identification	Fenestration Type	Surface Feature Area (ft <sup>2</sup> )	Required SHGC (From Table 140.3-B)	Required Area * SHGC	Proposed SHGC	Proposed Area * SHGC
<b>Total</b>						
Required Area-Weighted Average SHGC =						
Proposed Area-Weighted Average SHGC =						

*Note: If the **proposed** SHGC is less than or equal to the **required** SHGC, then the windows meet the prescriptive SHGC requirement.*

### D. Required and Proposed Area-Weighted Average Fenestration VT

01	02	03	04	05	06	07
Tag/ Identification	Fenestration Type	Surface Feature Area (ft <sup>2</sup> )	Required VT (From Table 140.3-B)	Area * VT	Proposed VT	Area * VT
<b>Total</b>						
Required Area-Weighted Average VT =						
Proposed Area-Weighted Average VT =						

*Note: If the **proposed** VT is greater than or equal to the **required** VT, then the windows meet the prescriptive VT requirement.*

**AREA WEIGHTED AVERAGE CALCULATION WORKSHEET**

CEC-NRCC-ENV-06-E (Revised 01/16)

CALIFORNIA ENERGY COMMISSION



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**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:

- The information provided on this Certificate of Compliance is true and correct.
- 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).
- 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.
- 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.
- I will ensure that a completed signed 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 completed signed 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: