



## Building Department, City of Centralia

118 W. Maple, PO Box 609

Centralia, WA 98531

Post this form on the furnace for inspection and verification by  
Inspector for the home owner.

### Energy Code Worksheets

#### Prescriptive Approach – Worksheet Instructions

For the Washington State Energy Code, **the prescriptive approach is the simplest method to code compliance.** However, depending on the prescriptive option and exceptions used, documentation of compliance can be quite complex.

The following forms provide much of the required documentation for plan review. The details noted here must also be shown on your project drawings per (WSEC 104.2).

This form is not a substitute for the energy code itself. To obtain a copy of the energy code, go to the following web address. <http://www.energy.wsu.edu/code>

#### Which worksheets do I need to complete? (Please read everything, some worksheets may not apply)

**There are four worksheets included in this set of forms.**

- *General Compliance Worksheet: (pg. 1-5) (Includes choosing a minimum of 1 Energy Credit, Table 9-1 see pg. 16-18)*
- *Glazing Schedule Worksheet: (pg. 6 & 7)*
- *Heating Sizing Worksheet: (Or Equivalent) (pg. 8)*
- *Residential Whole House Ventilation Worksheet: (Must choose one method) (pg. 9 & 10)*

#### Additional Requirements:

- *Duct Testing Affidavit: (pg. 11 & 12)*
- *Building Air Leakage Test (Blower Door) (Results must be posted on Compliance Certificate)(Pg. 11 & 12)*
- *Compliance Certificate: (pg. 15) (Must submit a copy to Building Division Office and post a copy on job site)*

#### Duct Test Affidavit:

A duct test must be performed and a Duct Testing Affidavit must be completed by a certified testing agency and submitted to the Building Division. **(See Duct Leakage Affidavit for possible exception)** Certificate Of Occupancy will not be issued until this requirement is met.

#### Compliance Certificate:

All new residences are required to post this certificate within three (3) feet of the electrical supply panel. Certificate must be completely filled out and posted at time of final inspection.

#### Heating Sizing Worksheet:

The energy and residential code requires a heating and cooling sizing calculations for all projects. If you are using this set of worksheets to size the heating system, you will need to complete all the worksheets. **If an ACCA Manual J (or equivalent) heating and / or cooling system sizing calculation is submitted, the heating sizing worksheet does not need to be completed.** It is important to note that the codes also require a cooling system size calculation. This form will not provide the cooling calculation. It does not have the needed solar gains function. If a cooling system is included in the submission (heat pump), you will need to perform a Manual J or equivalent calculation.

### **Glazing Schedule Worksheet:**

There are three reasons to complete the Glazing Schedule. **If none apply to your project, you do not need to complete the Glazing Schedule worksheet.** A glazing schedule is required to meet the following conditions.

1. The Prescriptive option includes a glazing to floor area limit (WSEC 602.7.2)
2. Not all the windows, skylights or doors comply with the maximum U-factor requirement. Qualification will be demonstrated using an area weighted window, skylight or door U-factor (WSEC 602.7.2)
3. As part of the heating and cooling system sizing calculation (IRC M1401.3 & WSEC 503.2.2)

### **General Compliance worksheets:**

The General Compliance worksheet documents the prescriptive option chosen to show compliance. It also provides a few checks on insulation compliance that need more detailed input. This worksheet is also used to document the reason for submission of the Glazing Worksheet.

If you are choosing a limited glazing area prescriptive option, completing the Glazing Schedule will be the first task.

### **Completing the General Compliance Worksheet**

**This is a simple fill in form.**

Fill in project information on this worksheet. It will be copied to the other worksheets.

Note what options be will chosen to show compliance.

Note the glazing documentation included.

**If you are using an unlimited glazing path, all windows and doors meet the maximum U-factor requirements and a Manual J (or approved alternative) heating system size calculation is submitted, this is the only form that needs to be completed.**

### **Completing the Glazing Schedule Worksheet:**

#### **Exterior Doors:**

The exterior door section is for swinging doors only. Enter sliding doors in the vertical glazing section of the worksheet.

If a swinging door includes glazing, it may be entered in the vertical glazing schedule or in the exterior door schedule.

Obtain NFRC tested U-factor from the door manufacturer or use U-factors from the WSEC Tables.

Table 10-6A Default U-factor for Vertical Glazing (use for doors with greater than 50% glazing.)

Table 10-6C Default U-factors for Doors (limited to doors with less than 50% glazing.)

Area of windows, doors and skylights are measured using the rough opening area.

Glazing area in exterior doors is added to the total glazing area of the project as follows:

If greater than 50%, 100% of the area is entered in the door glazing area.

If less than or equal to 50%, only the glazed area will be entered in the door glazing area.

Exempt Door: One door, 24 feet or less is not included in the U-factor of glazing area calculations. You must calculate the door area to assure it is 24 square feet or less. This also enters the door heat loss into the heating system size calculation.

## **Vertical and Horizontal Glazing:**

Obtain NFRC tested U-factor from the glazing supplier. These will give the most accurate and likely the most favorable results. If you can't obtain this data, the tables in Chapter 10 of the WSEC must be used.

For default U-factors for vertical glazing, refer to table 10-6A

If window manufacturer can legitimately be claimed as a "small business" (as defined in Chapter 2 of the WSEC), you may use table 10-6B for default U-factors. Note: the term "small business" refers to the glazing manufacturer, not the builder or building owner.

For default U-factors for overhead glazing, refer to table 10-6E

If doors are being entered into the vertical glazing table, refer to table 10-6C and 10-6D.

### Garden Window Exception Schedule

The WSEC allows double glazed, unrated garden windows with a wood or vinyl frame to be exempt from the U-factor calculation under the following rules.

The total area of this exemption is limited to 1 percent of the conditioned floor area up to a maximum

The area of the glazing must be multiplied by 3 and added to the total glazing area for the project.

## **Completing the Heating System Size Worksheet**

This worksheet is used to calculate the design heat load of the structure. It also calculates the maximum heating system size required by code. This worksheet does not perform required cooling load calculations. Use Manual J or equivalent for cooling system size calculations.

Go to the Outdoor Design Temperature Listed On Worksheet Tab. Locate the outdoor design temperature for a location near the project site. You need to enter the design temperature on this worksheet (Centralia Design Temp is 25).

Calculate and enter the volume of the interior space in the building (floor area x ceiling height).

Measure the dimensions of each exterior building assembly, wall, attic floor etc. Enter the area next to the R-value description that matches the construction. If a construction method is selected that is not represented here, select values from Chapter 10 of the WSEC and enter it in one of the blank spaces at the end of each components section.

Enter the correction factor for duct location. If the ducts are indoors, enter 1. If the ducts are in crawl space, attic or garage, enter 1.15