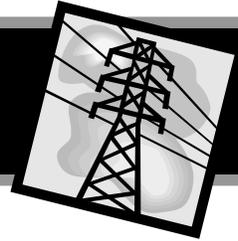


Residential Energy Code *In Skagit County*



2012 Washington State Energy Code

This worksheet is intended to assist you in deciding which methods of construction will be used to meet the requirements of the Washington State Energy Code. After completing this form, please add all relevant information to your construction plans.

PART 1

Whole-House Ventilation: Select **one** of the following methods.

- ___A. Fresh air will be circulated by the central forced air furnace. The furnace must have a fresh air intake duct and the blower must be activated by a timer to circulate air a total of 8 hours daily.
- ___B. Fresh air will be supplied by wall or window vent ports in each bedroom, kitchen, living room and other habitable rooms along with a whole-house exhaust fan. The exhaust fan, which usually does double duty as a laundry or bathroom fan, and must be controlled by a timer set to operate according to the fan sizes and time schedules below. The table below assumes a residence of 3000 square feet or less.

	<u>Continuous operation</u>	<u>12 hours per day</u>
1 bedroom	45 cfm	90 cfm
2 - 3 bedrooms	60 cfm	120 cfm
4 - 5 bedrooms	75 cfm	150 cfm

- ___C. A heat-recovery ventilation system with minimum CFM flow rates as shown in option B.

PART 2

Insulation and Windows:

<u>Framing</u>	<u>Glazing %</u>	<u>U-factor</u>	<u>Ceiling</u>	<u>Vaulted</u>	<u>Walls</u>	<u>Floor</u>	<u>Slab</u>
2x6 construction*	unlimited	0.30	R-49**	R-38	R-21	R-30	R-10

* If you intend to use 2x4 construction, R-5 foam insulation must be used on the exterior of the wall, in addition to R-15 wall cavity insulation.

** R-38 insulation may be used with advanced framing, meaning that elevated trusses or rafters must be used so that the full R-38 insulation will extend to the outside of the top plate of the wall.

PART 3

Air Leakage: The building envelope must limit air leakage rate to not exceed 5 air changes per hour (ACH). A blower door test will be required. Calculate your maximum allowed rate by using the following:

[Building volume (cubic ft.) X 5 (ACH)] / 60 minutes = maximum cfm rate during blower door test

[_____ cu. ft. X 5] / 60] = _____ maximum cfm rate during blower door test

SIGNATURE: _____

ENERGY CODE CHECKLIST

Section 502.4.5 of the Energy Code requires that the building envelope be tested (normally referred to as a "blower door test") to determine that air leakage is within acceptable levels. A leakage of .00030 SLA measured at 50 pascals is considered acceptable. Sealing of doors, windows, ducts or registers is not allowed during testing.

Section 503.10.2 requires leakage testing of the mechanical ducts to insure that the ducts are sealed. Testing may occur at rough-in or post-construction. Testing must comply with standard RS-33. Individuals performing the test must be approved or certified by the Washington State University Energy Office or approved other agency.

Section 505.1 requires that 75% of all luminaires (lights and lamps) be high efficiency.

Section 105.4 requires that a certificate be posted within three feet of the electrical panel, completed by the builder or design professional, and include the following information. R-values for ceiling, walls, floors, foundation, U-factors for windows, the type and efficiency of heating/cooling equipment, duct leakage rates from the duct testing, and the air leakage rates from the blower door testing. A certificate will be provided for your use at time of permit issuance.

Other Energy Code items to check or be aware of include the following.

- 6 mil black polyethylene covers the crawlspace area.
- Water lines in unheated areas are insulated.
- Heat ducts are insulated to R-8 and exhaust ducts are insulated to R-4.
- Whole house fan, if required, with a sone rating of 1.5 or less is installed, with timer or dehumidistat.
- Exterior doors are weather stripped.
- Baffles to maintain vent openings in ceiling are properly installed.
- Insulation is installed behind partitions and in corners; fitted around wiring and pipes.
- Insulation is installed behind bathtubs and showers.
- Openings around interior plumbing pipes in exterior walls are sealed.
- Furnace is the correct size.
- Fresh air system is installed, connected to the cold air return within four feet of the air handling unit.
- Interior doors are undercut to allow air movement.
- Exhaust fans terminate outside the building.
- Showers and lavatories have 3 gpm flow limiters.

For more information contact:

Skagit County Planning & Development Services
1800 Continental Place · Mount Vernon, WA 98273
(360) 336-9410 · Fax (360) 336-9416 · web site address: www.skagitcounty.net

