



# NORTHWEST ENERGY STAR HOMES CERTIFICATION REQUIREMENTS Single Family Homes

**NWBOP 1**  
Natural Gas Fired Furnaces &  
Electric Heat Pumps

Builder Option Packages (BOPs) are a prescriptive method for labeling new homes ENERGY STAR. All requirements of the NWBOP shall be met in order to qualify a home for Northwest ENERGY STAR Homes certification and verification by a Northwest ENERGY STAR Homes Verifier.

Insulation																			
Ceiling		R-38	Flat or vaulted.																
Wall		R-21	R-19 is optional with advanced framing techniques.																
Floors Over Unconditioned Space		R-30	Insulation in floor joist cavity. Perimeter insulation not allowed.																
Slab Floors	Unheated	R-10 Perimeter	Applies to all concrete slab floors above or below grade. R-5 thermal break at slab edge. Perimeter insulation shall be installed for a distance of 2 feet vertical, horizontal, or combined distance. In areas east of the Cascade mountains, 4 feet is recommended.																
	Heated Radiant	R-10 Full Slab																	
Basement Wall		R-19	Below grade walls can extend up to 24 inches above grade.																
Windows & Doors																			
Glazing	Windows	U-0.35																	
	Skylights	U-0.50	Skylight area shall not exceed 5% of heated floor area.																
	Max. Glazing Area	21% of Heated Floor Area	Combined window and skylight area. Up to 1% of heated floor area exempt.																
Doors		R-5	One door up to 28 ft <sup>2</sup> exempt.																
Ducts																			
Insulation		R-8	Ducts inside heated space exempt.																
Sealing		Mastic	Tapes not allowed.																
Max. Leakage		<0.06 CFM per ft <sup>2</sup> <b>OR</b> 75 CFM Total @50Pa	All forced air heating and cooling system ducts shall be installed according to Northwest ENERGY STAR Homes Specifications for sizing and leakage. Performance testing is required.																
Ventilation & Air Sealing																			
Ventilation System		Exhaust Ventilation	Local code requirements are deemed to satisfy this requirement.																
Envelope tightness		7.0 ACH @ 50 Pa	Local code requirements for air sealing are deemed to satisfy this requirement.																
Heating & Cooling Equipment																			
Gas Furnace		90 AFUE	Installed according to Northwest ENERGY STAR Homes specifications for sizing, controls, airflow and refrigerant charge. Performance testing is required.  * As of July 1, 2006 any home initiated in the Northwest ENERGY STAR Homes database utilizing a heat pump must be an 8.5 HSPF. Homes initiated prior to July 1, 2006 will qualify with an 8.0 HSPF/SEER 13 heat pump.																
Heat Pump		8.5 HSPF* / SEER 13																	
Air Conditioner		SEER 13																	
Water Heating																			
Natural Gas	≤ 60 gal	0.61	Gas commercial tank water heaters may be used if they have standby losses that do not exceed the following (btu/hr):																
	> 60 gal	0.60																	
Electric	≤ 70 gal	0.93	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td>Gallons</td> <td>70-74</td> <td>75-79</td> <td>80-84</td> <td>85-89</td> <td>90-94</td> <td>95-99</td> <td>100+</td> </tr> <tr> <td>Max Standby Loss</td> <td>930</td> <td>960</td> <td>980</td> <td>1010</td> <td>1030</td> <td>1060</td> <td>1080</td> </tr> </table>	Gallons	70-74	75-79	80-84	85-89	90-94	95-99	100+	Max Standby Loss	930	960	980	1010	1030	1060	1080
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Max Standby Loss	930	960	980	1010	1030	1060	1080												
	> 70 gal	0.92																	
Appliances & Lighting																			
Appliances		ENERGY STAR Qualified	Applies to built-in appliances only.																
Lighting		ENERGY STAR Qualified	A minimum of 50% of sockets to be either ENERGY STAR bulbs, fixtures, or both																