WASHINGTON STATE ENERGY CODE, RESIDENTIAL PROVISIONS

TABLE 406.2 ENERGY CREDITS (DEBITS)

OPTION	DESCRIPTION	CREDIT(S)
1a	EFFICIENT BUILDING ENVELOPE 1a: Prescriptive compliance is based on Table R402.1.1 with the following modifications: Fenestration U .= 0.28 Floor R-38 Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab or	0.5
	Compliance based on Section R402.1.4: Reduce the Total UA by 5%.	
1b	EFFICIENT BUILDING ENVELOPE 1b: Prescriptive compliance is based on Table R402.1.1 with the following modifications: Fenestration U .= 0.25 Wall R-21 plus R-4 Floor R-38 Basement wall R-21 int plus R-5 ci Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab or	1.0
	Compliance based on Section R402.1.4: Reduce the Total UA by 15%.	
1c	EFFICIENT BUILDING ENVELOPE 1c: Prescriptive compliance is based on Table R402.1.1 with the following modifications: Fenestration U .= 0.22 Ceiling and single-rafter or joist-vaulted R-49 advanced Wood frame wall R-21 int plus R-12 ci Floor R-38 Basement wall R-21 int plus R-12 ci Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab or Compliance based on Section R402.1.4: Reduce the Total UA by 30%.	2.0
2a	AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2a: Compliance based on R402.4.1.2: Reduce the tested air leakage to 4.0 air changes per hour maximum and All whole house ventilation requirements as determined by Section M1507.3 of the International Residential Code shall be met with a high efficiency fan (maximum 0.35 watts/cfm), not interlocked with the furnace fan ventilation systems using a furnace including an ECM motor are allowed, provided that they are controlled to operate at low speed in ventilation only mode. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.	0.5

2b	AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2b:	1.0
20	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 2.0 air	1.0
	changes per hour maximum	
	and	
	All whole house ventilation requirements as determined by Section M1507.3 of the	
	International Residential Code shall be met with a heat recovery ventilation system	
	with minimum sensible heat recovery efficiency of 0.70.	
	To qualify to claim this credit, the building permit drawings shall specify the option	
	being selected and shall specify the maximum tested building air leakage and shall	
	show the heat recovery ventilation system.	
2c	AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2c:	1.5
20	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 1.5 air	1.5
	changes per hour maximum	
	and	
	All whole house ventilation requirements as determined by Section M1507.3 of the	
	International Residential Code shall be met with a heat recovery ventilation system	
	with minimum sensible heat recovery efficiency of 0.85.	
	To qualify to claim this credit, the building permit drawings shall specify the option	
	being selected and shall specify the maximum tested building air leakage and shall	
	show the heat recovery ventilation system.	
3a	HIGH EFFICIENCY HVAC EQUIPMENT 3a:	0.5
Ja	Gas, propane or oil-fired furnace with minimum AFUE of 95%	0.5
	To qualify to claim this credit, the building permit drawings shall specify the option	
	being selected and shall specify the heating equipment type and the minimum	
	equipment efficiency.	
2h		1.0
3b	HIGH EFFICIENCY HVAC EQUIPMENT 3b:	1.0
	Air-source heat pump with minimum HSPF of 8.5	
	To qualify to claim this credit, the building permit drawings shall specify the option	
	being selected and shall specify the heating equipment type and the minimum equipment efficiency.	
3c	HIGH EFFICIENCY HVAC EQUIPMENT 3c:	2.0
30		2.0
	Closed-loop ground source heat pump; with a minimum COP of 3.3	
Ì	Or Open lead water source heat numb with a maximum numbia by decilis head of 150	
	Open loop water source heat pump with a maximum pumping hydraulic head of 150 feet and minimum COP of 3.6	
	To qualify to claim this credit, the building permit drawings shall specify the option	
	being selected and shall specify the heating equipment type and the minimum	
	equipment efficiency.	
2.1	HIGH EFFICIENCY HVAC EQUIPMENT 3d:	1.0
3d		1.0
	DUCTLESS SPLIT SYSTEM HEAT PUMPS, ZONAL CONTROL:	
	In homes where the primary space heating system is zonal electric heating, a ductless	
	heat pump system shall be installed and provide heating to at least one zone of the	
	housing unit. To qualify to plain this gradit, the hailding normit drawings shall gradify the antian	
	To qualify to claim this credit, the building permit drawings shall specify the option	
	being selected and shall specify the heating equipment type and the minimum	
4	equipment efficiency.	1.0
4	HIGH EFFICIENCY HVAC DISTRIBUTION SYSTEM: All bacting and applies system common arts installed inside the conditioned areas. All	1.0
	All heating and cooling system components installed inside the conditioned space. All	
	combustion equipment shall be direct vent or sealed combustion.	
	Locating system components in conditioned crawl spaces is not permitted under this	
	option.	
	Electric resistance heat is not permitted under this option.	
	Direct combustion heating equipment with AFUE less than 80% is not permitted	
	under this option.	
	To qualify to claim this credit, the building permit drawings shall specify the option	
	being selected and shall specify the heating equipment type and shall show the	
	location of the heating and cooling equipment and all the ductwork.	

5a	EFFICIENT WATER HEATING 5a:	0.5
Ja	Water heating system shall include one of the following:	0.5
	Gas, propane or oil water heater with a minimum EF of 0.62	
	or	
	Electric water heater with a minimum EF of 0.93.	
	and for both cases	
	All showerhead and kitchen sink faucets installed in the house shall be rated at 1.75	
	GPM or less. All other lavatory faucets shall be rated at 1.0 GPM or less. ^b	
	To qualify to claim this credit, the building permit drawings shall specify the option	
	being selected and shall specify the water heater equipment type and the minimum	
	equipment efficiency and shall specify the maximum flow rates for all showerheads,	
	kitchen sink faucets, and other lavatory faucets.	
5b	EFFICIENT WATER HEATING 5b:	1.5
30	Water heating system shall include one of the following:	1.5
	Gas, propane or oil water heater with a minimum EF of 0.82	
	or	
	Solar water heating supplementing a minimum standard water heater. Solar water	
	heating will provide a rated minimum savings of 85 therms or 2000 kWh based on the	
	Solar Rating and Certification Corporation (SRCC) Annual Performance of OG-300	
	Certified Solar Water Heating Systems	
	or	
	Electric heat pump water heater with a minimum EF of 2.0 and meeting the standards	
	of NEEA's Northern Climate Specifications for Heat Pump Water Heaters	
	or	
	Water heater heated by ground source heat pump meeting the requirements of Option	
	3c.	
	To qualify to claim this credit, the building permit drawings shall specify the option	
	being selected and shall specify the water heater equipment type and the minimum	
	equipment efficiency and, for solar water heating systems, the calculation of the	
	minimum energy savings.	
6	RENEWABLE ELECTRIC ENERGY:	0.5
	For each 1200 kWh of electrical generation provided annually by on-site wind or solar	0.5
	equipment a 0.5 credit shall be allowed, up to 3 credits. Generation shall be calculated	
	as follows:	
	For solar electric systems, the design shall be demonstrated to meet this requirement	
	using the National Renewable Energy Laboratory calculator PVWATTs.	
	Documentation noting solar access shall be included on the plans.	
	For wind generation projects designs shall document annual power generation based	
	on the following factors:	
	The wind turbine power curve; average annual wind speed at the site; frequency	
	distribution of the wind speed at the site and height of the tower.	
	To qualify to claim this credit, the building permit drawings shall specify the option	
	being selected and shall show the photovoltaic or wind turbine equipment type,	
	provide documentation of solar and wind access, and include a calculation of the	
	minimum annual energy power production.	

a. Interior Duct Placement. Ducts included as Option 4 of Table R406.2 shall be placed wholly within the heated envelope of the housing unit. The placement shall be inspected and certified to receive the credits associated with this option.

Exception: Ducts complying with this section may have up to 5% of the total linear feet of ducts located in the exterior cavities or buffer spaces of the dwelling. If this exception is used the ducts will be tested to the following standards:

Post-construction test: Leakage to outdoors shall be less than or equal to 1 CFM per 100 ft² of conditioned floor area when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. All register boots shall be taped or otherwise sealed during the test.

- b. **Plumbing Fixtures Flow Ratings.** Low flow plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following requirements:
 - Residential bathroom lavatory sink faucets: Maximum flow rate 3.8 L/min (1.0 gal/min) when tested in accordance with ASME A112.18.1/CSA B125.1.
 - Residential kitchen faucets: Maximum flow rate 6.6 L/min (1.75 gal/min) when tested in accordance with ASME A112.18.1/CSA B125.1.
 - Residential showerheads: Maximum flow rate 6.6 L/min (1.75 gal/min) when tested in accordance with ASME A112.18.1/CSA B125.1.