

**2018 Washington State Energy Code – Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Single Family – New & Additions (effective February 1, 2021)**

These requirements apply to all IRC building types, including detached one- and two-family dwellings and multiple single-family dwellings (townhouses).

Project Information	Contact Information

Instructions: This single-family project will use the requirements of the Prescriptive Path below and incorporate the minimum values listed. Based on the size of the structure, the appropriate number of additional credits are checked as chosen by the permit applicant.

Provide all information from the following tables as building permit drawings: Table R402.1 - Insulation and Fenestration Requirements by Component, Table R406.2 - Fuel Normalization Credits and 406.3 - Energy Credits.

Authorized Representative **Date**

All Climate Zones (Table R402.1.1)		
	R-Value ^a	U-Factor ^a
Fenestration U-Factor ^b	n/a	0.30
Skylight U-Factor ^b	n/a	0.50
Glazed Fenestration SHGC ^{b,e}	n/a	n/a
Ceiling ^e	49 ^j	0.026
Wood Frame Wall ^{a,h}	21 int	0.056
Floor	30	0.029
Below Grade Wall ^{c,h}	10/15/21 int + TB	0.042
Slab ^{d,f} R-Value & Depth	10, 2 ft	n/a

R-values are minimums. *U*-factors and SHGC are maximums. When insulation is installed in a cavity that is less than the label or design thickness of the insulation, the compressed *R*-value of the insulation from Appendix Table A101.4 shall not be less than the *R*-value specified in the table.

- b** The fenestration *U*-factor column excludes skylights.
"10/15/21 +5TB" means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the interior of the wall, or R-21 cavity insulation plus a thermal break between the slab and the basement wall at the interior of the basement wall. "10/15/21 +5TB" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the wall. "5TB" means R-5 thermal break between floor slab and basement wall.
- d** R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.9.1.
- e** For single rafter- or joist-vaulted ceilings, the insulation may be reduced to R-38 if the full insulation depth extends over the top plate of the exterior wall.
R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics.
- f** For log structures developed in compliance with Standard ICC 400, log walls shall meet the requirements for climate zone 5 of ICC 400.
- g** Int. (intermediate framing) denotes framing and insulation as described in Section A103.2.2 including standard
- h** framing 16 inches on center, 78% of the wall cavity insulated and headers insulated with a minimum of R-10 insulation.

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Each dwelling unit *in a residential building* shall comply with sufficient options from Table R406.2 (fuel normalization credits) and Table 406.3 (energy credits) to achieve the following minimum number of credits. To claim this credit, the building permit drawings shall specify the option selected and the maximum tested building air leakage, and show the qualifying ventilation system and its control sequence of operation.

1. **Small Dwelling Unit: 3 credits**
Dwelling units less than 1,500 sf in conditioned floor area with less than 300 sf of fenestration area.
Additions to existing building that are greater than 500 sf of heated floor area but less than 1,500 sf.
2. **Medium Dwelling Unit: 6 credits**
All dwelling units that are not included in #1 or #3
3. **Large Dwelling Unit: 7 credits**
Dwelling units exceeding 5,000 sf of conditioned floor area
4. **Additions less than 500 square feet: 1.5 credits**
All other additions shall meet 1-3 above

Before selecting your credits on this Summary table, review the details in Table 406.3 (Single Family), on page 4.

Summary of Table R406.2

Heating Options		Fuel Normalization Descriptions	Credits - select ONE heating option	User Notes
1	Combustion heating minimum NAECA ^b		0.0 <input type="checkbox"/>	
2	Heat pump ^c		1.0 <input type="checkbox"/>	
3	Electric resistance heat only - furnace or zonal		-1.0 <input type="checkbox"/>	
4	DHP with zonal electric resistance per option 3.4		0.5 <input type="checkbox"/>	
5	All other heating systems		-1.0 <input type="checkbox"/>	
Energy Options		Energy Credit Option Descriptions	Credits - select ONE energy option from each category ^d	User Notes
1.1	Efficient Building Envelope		0.5 <input type="checkbox"/>	
1.2	Efficient Building Envelope		1.0 <input type="checkbox"/>	
1.3	Efficient Building Envelope		0.5 <input type="checkbox"/>	
1.4	Efficient Building Envelope		1.0 <input type="checkbox"/>	
1.5	Efficient Building Envelope		2.0 <input type="checkbox"/>	
1.6	Efficient Building Envelope		3.0 <input type="checkbox"/>	
1.7	Efficient Building Envelope		0.5 <input type="checkbox"/>	
2.1	Air Leakage Control and Efficient Ventilation		0.5 <input type="checkbox"/>	
2.2	Air Leakage Control and Efficient Ventilation		1.0 <input type="checkbox"/>	
2.3	Air Leakage Control and Efficient Ventilation		1.5 <input type="checkbox"/>	
2.4	Air Leakage Control and Efficient Ventilation		2.0 <input type="checkbox"/>	
3.1 ^a	High Efficiency HVAC		1.0 <input type="checkbox"/>	
3.2	High Efficiency HVAC		1.0 <input type="checkbox"/>	
3.3 ^a	High Efficiency HVAC		1.5 <input type="checkbox"/>	
3.4	High Efficiency HVAC		1.5 <input type="checkbox"/>	
3.5	High Efficiency HVAC		1.5 <input type="checkbox"/>	
3.6 ^a	High Efficiency HVAC		2.0 <input type="checkbox"/>	
4.1	High Efficiency HVAC Distribution System		0.5 <input type="checkbox"/>	
4.2	High Efficiency HVAC Distribution System		1.0 <input type="checkbox"/>	

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Summary of Table R406.2 (cont.)

Energy Options	Energy Credit Option Descriptions (cont.)	Credits - select ONE energy option from each category^d	User Notes
5.1 ^d	Efficient Water Heating	0.5 <input type="checkbox"/>	
5.2	Efficient Water Heating	0.5 <input type="checkbox"/>	
5.3	Efficient Water Heating	1.0 <input type="checkbox"/>	
5.4	Efficient Water Heating	1.5 <input type="checkbox"/>	
5.5	Efficient Water Heating	2.0 <input type="checkbox"/>	
5.6	Efficient Water Heating	2.5 <input type="checkbox"/>	
6.1 ^e	Renewable Electric Energy (3 credits max)	1.0 <input type="checkbox"/>	
7.1	Appliance Package	0.5 <input type="checkbox"/>	
Total Credits		<input type="text" value="0.0"/>	<input type="button" value="CLEAR FORM"/>

- a. An alternative heating source sized at a maximum of 0.5 W/sf (equivalent) of heated floor area or 500 W, whichever is bigger, may be installed in the dwelling unit.
- b. Equipment listed in Table C403.3.2(4) or C403.3.2(5)
- c. Equipment listed in Table C403.3.2(1) or C403.3.2(2)
- d. **You cannot select more than one option from any category EXCEPT in category 5. Option 5.1 may be combined with options 5.2 through 5.6. See Table 406.3.**
- e. 1.0 credit for each 1,200 kWh of electrical generation provided annually, up to 3 credits max. See the complete Table R406.2 for all requirements and option descriptions.

Please print only pages 1 through 3 of this worksheet for submission to your building official.

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Table 406.3 – Energy Credits (Single Family)

Option	Description	Credits: SF
1. EFFICIENT BUILDING ENVELOPE OPTIONS		
Only one option from Items 1.1 through 1.7 may be selected in this category.		
Compliance with the conductive UA targets is demonstrated using Section R402.1.4, Total UA alternative, where $[1 - (\text{Proposed UA} / \text{Target UA})] >$ the required %UA reduction.		
1.1	Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 0.24	0.5
1.2	Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 0.20	1.0
1.3	Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical 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 Compliance based on Section R402.1.4: Reduce the Total conductive UA by 5% Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 0.25 Wall R-21 plus R-4 ci Floor R-38	0.5
1.4	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 Compliance based on Section R402.1.4: Reduce the Total conductive UA by 15% Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical 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	1.0
1.5	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 conductive UA by 30% Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 0.18 Ceiling and single-rafter or joist-vaulted R-60 advanced Wood frame wall R-21 int plus R-16 ci	2.0
1.6	Floor R-48 Basement wall R-21 int plus R-16 ci Slab on grade R-20 perimeter and under entire slab Below grade slab R-20 perimeter and under entire slab or Compliance based on Section R402.1.4: Reduce the Total conductive UA by 40%. Advanced framing and raised heel trusses or rafters Vertical Glazing U-0.28	3.0
1.7	R-49 Advanced (U-0.020) as listed in Section A102.2.1, <i>Ceilings below a vented attic and</i> R-49 vaulted ceilings with full height of uncompressed insulation extending over the wall top plate at the eaves.	0.5

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Option	Description	Credits: SF
2. AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION OPTIONS		
Only one option from Items 2.1 through 2.4 may be selected in this category.		
2.1	<p>Compliance based on R402.4.1.2: Reduce the tested air leakage to 3.0 air changes per hour maximum at 50 Pascals <i>or</i></p> <p>For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to 0.3 cfm/sf maximum at 50 Pascals and</p> <p>All whole house ventilation requirements as determined by Section M1507.3 of the <i>International Residential Code</i> or Section 403.8 of the <i>International Mechanical Code</i> shall be met with a high efficiency fan(s) (maximum 0.35 watts/cfm), not interlocked with the furnace fan (if present). 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.</p> <p>To qualify to claim this credit, the building permit drawings shall specify the option being selected and the maximum tested building air leakage, and shall show the qualifying ventilation system and its control sequence of operation.</p> <p>Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 2.0 air changes per hour maximum at 50 Pascals or</p>	0.5
2.2	<p>For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to 0.25 cfm/sf maximum at 50 Pascals <i>and</i></p> <p>All whole house ventilation requirements as determined by Section M1507.3 of the <i>International Residential Code</i> or Section 403.8 of the <i>International Mechanical Code</i> shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.65.¹</p> <p>Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 1.5 air changes per hour maximum at 50 Pascals <i>or</i></p>	1.0
2.3	<p>For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to 0.25 cfm/sf maximum at 50 Pascals <i>and</i></p> <p>All whole house ventilation requirements as determined by Section M1507.3 of the <i>International Residential Code</i> or Section 403.8 of the <i>International Mechanical Code</i> shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.75.¹</p> <p>Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 0.6 air changes per hour maximum at 50 Pascals <i>or</i></p>	1.5
2.4	<p>For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to 0.15 cfm/sf maximum at 50 Pascals <i>and</i></p> <p>All whole house ventilation requirements as determined by Section M1507.3 of the <i>International Residential Code</i> or Section 403.8 of the <i>International Mechanical Code</i> shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.80. Duct installation shall comply with Section R403.3.7.¹</p>	2.0

¹ 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.

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Table 406.3 – Energy Credits (Single Family)

Option	Description	Credits: SF
3. HIGH EFFICIENCY HVAC EQUIPMENT OPTIONS		
Only one option from Items 3.1 through 3.6 may be selected in this category.		
3.1 ²	Energy Star rated (U.S. North) Gas or propane furnace with minimum AFUE of 95% <i>or</i> Energy Star rated (U.S. North) Gas or propane boiler with minimum AFUE of 90%. ²	1.0
3.2 ²	Air-source centrally ducted heat pump with minimum HSPF of 9.5. ³	1.0
3.3 ²	Closed-loop ground source heat pump; with a minimum COP of 3.3 <i>or</i> Open loop water source heat pump with a maximum pumping hydraulic head of 150 feet and minimum COP of 3.6. ³	1.5
3.4	Ductless mini-split heat pump system, zonal control: In homes where the primary space heating system is zonal electric heating, a ductless mini-split heat pump system with a minimum HSPF of 10.0 shall be installed and provide heating to the largest zone of the housing unit. ⁴	1.5
3.5 ²	Air-source, centrally ducted heat pump with minimum HSPF of 11.0. ⁴ Ductless split system heat pumps with no electric resistance heating in the primary living areas. A ductless heat pump system with a minimum HSPF of 10 shall be sized and installed to provide heat to entire dwelling unit at the design outdoor air temperature.	1.5
3.6 ²	To qualify to claim this credit, the building permit drawings shall specify the option being selected, the heated floor area calculation, the heating equipment type(s), the minimum equipment efficiency, and total installed heat capacity (by equipment type).	2.0
² An alternative heating source sized at a maximum of 0.5 W/sf(equivalent) of heated floor area or 500 W, whichever is bigger, may be installed in the dwelling unit.		
³ 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.		
⁴ 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.		
4. HIGH EFFICIENCY HVAC DISTRIBUTION SYSTEM OPTIONS		
All supply and return ducts located in an unconditioned attic shall be deeply buried in ceiling insulation in accordance with Section R403.3.7.		
4.1	For mechanical equipment located outside the conditioned space, a maximum of 10 linear feet of return duct and 5 linear feet of supply duct connections to the equipment may be outside the deeply buried insulation. All metallic ducts located outside the conditioned space must have both transverse and longitudinal joints sealed with mastic. If flex ducts are used, they cannot contain splices.	0.5
Duct leakage shall be limited to 3 cfm per 100 square feet of conditioned floor area.		
Air handler(s) shall be located within the conditioned space. HVAC equipment and associated duct system(s) installation shall comply with the requirements of Section R403.3.7.		
Locating system components in conditioned crawl spaces is not permitted under this option.		
4.2	Electric resistance heat and ductless heat pumps are not permitted under this option.	1.0
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.		

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Table 406.3 – Energy Credits (Single Family)

Option	Description	Credits: SF
5. EFFICIENT WATER HEATING OPTIONS		
Only one option from Items 5.2 through 5.6 may be selected in this category. Item 5.1 may be combined with any option.		
5.1	<p>A drain water heat recovery unit(s) shall be installed, which captures waste water heat from all and only the showers, and has a minimum efficiency of 40% if installed for equal flow or a minimum efficiency of 54% if installed for unequal flow. Such units shall be rated in accordance with CSA B55.1 or IAPMO IGC 346-2017 and be so labeled.</p>	0.5
	<p>To qualify to claim this credit, the building permit drawings shall include a plumbing diagram that specifies the drain water heat recovery units and the plumbing layout needed to install it. Labels or other documentation shall be provided that demonstrates that the unit complies with the standard.</p>	
5.2	<p>Water heating system shall include one of the following: Energy Star rated gas or propane water heater with a minimum UEF of 0.80. ⁵ Water heating system shall include one of the following: Energy Star rated gas or propane water heater with a minimum UEF of 0.91 <i>or</i></p>	0.5
5.3	<p>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 <i>or</i></p>	1.0
	<p>Water heater heated by ground source heat pump meeting requirements of Option 3.3. 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 minimum energy savings.</p>	
5.4	<p>Water heating system shall include one of the following: Electric heat pump water heater meeting the standards for Tier I of NEEA's advanced water heating specification <i>or</i></p>	
5.5	<p>For R-2 Occupancy, electric heat pump water heater(s), meeting the standards for Tier I of NEEA's advanced water heating specification, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. ⁵ Water heating system shall include one of the following: Electric heat pump water heater meeting the standards for Tier III of NEEA's advanced water heating specification <i>or</i></p>	1.5
5.6	<p>For R-2 Occupancy, electric heat pump water heater(s), meeting the standards for Tier III of NEEA's advanced water heating specification, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. ⁵</p>	2.0
	<p>Water heating system shall include one of the following: Electric heat pump water heater with a minimum UEF of 2.9 and utilizing a split system configuration with the air-to-refrigerant heat exchanger located outdoors. Equipment shall meet Section 4, requirements for all units, of the NEEA standard <i>Advanced Water Heating Specification</i> with the UEF noted above <i>or</i></p>	
5.6	<p>For R-2 Occupancy, electric heat pump water heater(s), meeting the standards for Tier III of NEEA's advanced water heating specification and utilizing a split system configuration with the air-to-refrigerant heat exchanger located outdoors, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. ⁵</p>	2.5
<p>⁵ 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.</p>		

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Option	Description	Credits: SF
6. RENEWABLE ELECTRIC ENERGY OPTION		
	<p>For each 1200 kWh of electrical generation per housing unit provided annually by on-site wind or solar equipment a 1.0 credit shall be allowed, up to 3 credits. Generation shall be calculated as follows:</p> <p>For solar electric systems, the design shall be demonstrated to meet this requirement using the National Renewable Energy Laboratory calculator PVWATTS or approved alternate by the code official.</p>	
6.1	<p>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.</p> <p>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.</p>	1.0
7. APPLIANCE PACKAGE OPTION		
	<p>All of the following appliances shall be new and installed in the dwelling unit and shall meet the following standards:</p> <p>Dishwasher – Energy Star rated Refrigerator (if provided) – Energy Star rated Washing machine – Energy Star rated</p>	
7.1	<p>Dryer – Energy Star rated, ventless dryer with minimum CEF rating of 5.2</p> <p>To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the appliance type and provide documentation of Energy Star compliance. At the time of inspection, all appliances shall be installed and connected to utilities. Dryer ducts and exterior dryer vent caps are not permitted to be installed in the dwelling unit.</p>	0.5

Examples of how to obtain 6.0 credits for single-family residences:

All Electric Heat Pump 1,500 to 5,000 sf homes (6.0 credits)

Opt	Description— Feb. 1, 2021	Pts
3.2 (a)	HSPF 9.5 centrally ducted heat pump	1.0
4.2	All ducts and furnace inside the conditioned space	1.0
2.1	3 ACH ₅₀ , Energy Star 0.3 cfm/sf	0.5
1.3	R-38 floors (R10 under slab) and U-0.28 windows and door average	0.5
5.5	Heat pump water heater NEEA Tier III	2.0
Heat HP	Fuel normalization heat pump credit	1.0
Total		6.0

Heat Pump & Gas DHW 1,500 to 5,000 sf homes (6.0 credits)

Opt	Description— Feb. 1, 2021	Pts
3.5a	11.0 HSPF centrally ducted heat pump	1.5
4.2	All ducts and furnace inside conditioned space	1.0
2.1	3 ACH ₅₀ , Energy Star 0.3 cfm/sf	0.5
1.4	U-0.25 windows, R38 crawl/R10 under slab, R21 with R4 CI on exterior walls	1.0
5b	Gas water heater ≥ 0.91 UEF	1.0
Heat HP	Fuel normalization heat pump credit	1.0
Total		6.0

Gas Heat + HPWH

1,500 to 5,000 sf homes (6.0 credits)

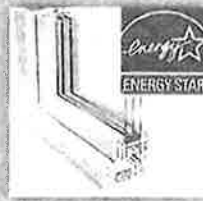
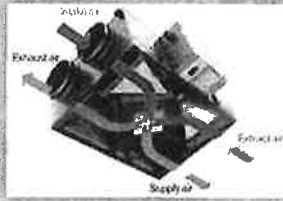
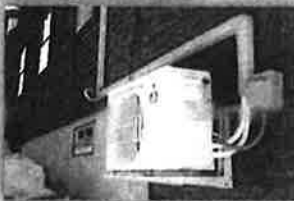
Opt	Description – Feb. 1, 2021	Pts
3.1a	95% AFUE gas furnace	1.0
4.2	All ducts and furnace inside conditioned space	1.0
2.1	3 ACH ₅₀ , Energy Star 0.3 cfm/sf	0.5
1.4	U-0.25 windows, R38 crawl/R10 under slab, R21 with R4 CI exterior walls	1.0
7.1	Appliance Credit: Energy Star dishwasher, washer, refrigerator (if provided) and vent-less dryer (CEF 5.2)	0.5
5b	Heat pump water heater NEEA Tier III	2.0
	Total	6.0



Examples of how to obtain 6.0 credits for multifamily residences:

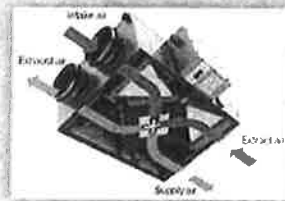
DHP + Electric Heat Multifamily - Low-Rise R2

Opt	Description – Feb. 1, 2021	Pts
3.4	DHP with electric resistance	2.0
1.2	Triple pane window U=0.22	1.0
2.1	0.25 cfm50/sf unit sf (or 2 ACH ₅₀) + 65% HRV/ERV – tested!!!	1.5
	Total	4.5



HSPF 10 VRF-HP Multifamily - Low-Rise R2

Opt	Description -- Feb. 1, 2021	Pts
2	Fuel normalization - HP	1.0
3.6	All HSPF 10 (ducted cassette)	3.0
2.2	0.25 cfm 50/sf unit sf (or 2 ACH ₅₀) + 65% HRV/ERV - tested!!!	1.5
	Total	5.5



Property address: _____

Builder/registered design professional name: _____

Builder/reg. design pro. signature: _____

Conditioned floor area: _____ ft² (per building permit)

R-Values (R303.1.1)

Ceiling/Vaulted R- _____ Floors: Over unconditioned space R- _____

Attic: Attic R- _____ Slab-on-grade floor R- _____

Walls: Above grade R- _____ Fully insulated slab? Y/N (Circle one)

Below, int. R- _____ Doors: R- _____ R- _____ R- _____

Below, ext. R- _____

U-Value of Windows, Skylights and Doors (R303.1.1.3)

Average area weighted U-value from Glazing Worksheet _____ Average U- _____

Fuel Normalization (Tables R406.2) and Energy Credits (Table R406.3)

System Type Number (1 to 5) _____ (Select one)

Energy Credits selected (1 to 7) _____

Fuel Normalization Credit _____ + Total Energy Credits _____ = Total Credits _____

System	Heating, Cooling and Domestic Hot Water Type (Manufacturer and Model Number)	Efficiency
Heating		
Cooling		
DHW		
Drain water heat recovery		

Onsite Renewable Energy Electric Power System

System type _____ System design capacity _____ kW

Rated annual generation _____ kWh/yr

Appliances		Energy Star?
Manufacturer and Model		(Circle one)
Dish washer		Y or N
Refrigerator		Y or N
Washer		Y or N
Dryer		Y or N

Vented or unvented? _____ If vented, CEF rating _____

Gas fireplace / heating stove (Section R402.4.2) _____ Fireplace efficiency (FE) _____

Heating or Decorative? (Circle one) _____

HVAC System Duct Leakage Testing (R403.3) Circle one

All ductwork and air handler in conditioned space? (See Option 4.2) _____ Y or N

All ductwork in unconditioned spaces buried and tested at 3% total leakage, and air handler in conditioned space? (See Option 4.1.) _____ Y or N

All ductwork & air handler outside conditioned space insulated to minimum R-8? _____ Y or N

Air handler present at duct leakage test? (Total leakage 4% if yes, 3% if no) _____ Y or N

HVAC leakage to outside test conducted at final? _____ Y or N

Do HVAC duct leakage tests include GPS and time stamp verification? _____ Y or N

HVAC system leakage test calculated design target: _____ CFM @ 25 Pa

HVAC system leakage test measured results: _____ CFM @ 25 Pa

Building Leakage Testing (R402.4.1.2)

Dwelling unit leakage test calculated design target: _____ ACH @ 50 Pa

Dwelling unit leakage test, measured results: _____ ACH @ 50 Pa

Whole Building Leakage test (R2 corridor only) design target: _____ CFM/sf @ 50 Pa

Whole Building Leakage test (R2 corridor only) measured: _____ CFM/sf @ 50 Pa

Do building leakage tests include GPS and time stamp verification? _____ Y or N

Whole House Ventilation System Measured Flow Rates (M1505.4 IRC-WA) Circle one

Are the system controls correctly labeled? _____ Y or N

The Whole House Ventilation (WHV) system operation and maintenance (O&M) instructions were provided to the building owner? _____ Y or N

Provided to: _____ on _____ (date)

Whole House Ventilation System Type: (Circle one)

(1) Whole house exhaust fan, location _____

(2) Balanced HRV/ERV, location _____

For R2 low-rise, serves more than one unit? _____ Y or N

(3) Supply or HRV WHV integral to the air handler. Describe system control sequence of operations or reference to design submittal: _____

Specify run-time: _____ hours per day _____ CFM

WHV calculated design minimum flow rate per plan submittal: _____

WHV measured min flow rate at commissioning: Exhaust _____ CFM, Supply _____ CFM

Do WHV flow tests include GPS & time stamp verification? _____ Y or N

HRV/ERV sensible heat recovery efficiency: _____

Commissioning Notes: _____

Other Mandatory Requirements Circle one

All other mandatory requirements of WSEC-R have been met? _____ Y or N



Permit #:	
House address or lot number:	
Walls	Blown or Sprayed Fiberglass or Cellulose - Walls
Type of insulation:	R-value per inch:
Manufacturer:	Coverage area:
R-value:	Bag count:
Floor	Blown or Sprayed Fiberglass or Cellulose - Ceiling
Type of insulation:	R-value per inch:
Manufacturer:	Coverage area:
R-value:	Bag count:
Flat Ceiling/Attic	Sprayed Polyurethane Foam (SPF)
Type of insulation:	Density:
Manufacturer:	Installed thickness:
R-value:	R-value of installed thickness:
Single Rafter Joist Vaulted Ceiling	Building component installed: (circle one) walls floor ceiling
Type of insulation:	
Manufacturer:	
R-value:	
Insulation Installer	
Company name:	
Installer name:	
Installer signature:	
Date:	
Phone number:	
Email:	

Washington State Energy Code Reference:

R303.1 Identification. Materials, systems and equipment shall be identified in a manner that will allow a determination of compliance with the applicable provisions of this code.

R303.1.1 Building thermal envelope insulation. An R-value identification mark shall be applied by the manufacturer to each piece of building thermal envelope insulation 12 inches (305 mm) or greater in width. Alternately, the insulation installers shall provide a certification listing the type, manufacturer and R-value of insulation installed in each element of the building thermal envelope. For blown or sprayed insulation (fiberglass and cellulose), the initial installed thickness, settled thickness, settled R-value, installed density, coverage area and number of bags installed shall be listed on the certification. For sprayed polyurethane foam (SPF) insulation, the installed thickness of the areas covered and R-value of installed thickness shall be listed on the certification. For insulated siding, the R-value shall be labeled on the product's package and shall be listed on the certification. The insulation installer shall sign, date and post the certification in a conspicuous location on the job site.

Exception: For roof insulation installed above the deck, the R-value shall be labeled as required by the material standards specified in Table 1508.2 of the *International Building Code* or Table R906.2 of the *International Residential Code*.