

# HOT2000

Natural Resources CANADA  
Version v11.3



**File:** 1234 Fulton Ave..h2k  
House with standard operating conditions

**Weather Library:** C:\HOT2000 v11.3\Dat\Wth110.dir  
**Weather Data for:** VANCOUVER, BRITISH COLUMBIA

**Builder Code:**

**Data Entry by:** Jane Smith  
**Date of entry:** 2018/06/14

**Company:** ABC Energy Advisor

**Client name:** Anderson, Jill  
**Street address:** 1234 Fulton Ave.  
**City:** West Vancouver  
**Postal code:** V7V3T3

**Region:** BRITISH COLUMBIA  
**Telephone:** 604-123-4567

**Mailing address:** 1234 Fulton Ave.  
**City:** West Vancouver  
**Postal Code:** V7V3T3

**Region:** BRITISH COLUMBIA

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## GENERAL HOUSE CHARACTERISTICS

**House type:** Single Detached  
**Number of storeys:** One storey  
**Plan shape:**  
**Front orientation:** South  
**Year House Built:** 2017

**Wall colour:** Default  
**Roof colour:** Default

**Absorptivity:** 0.40  
**Absorptivity:** 0.40

**Soil Condition:** Normal conductivity (dry sand, loam, clay)  
**Water Table Level:** Normal (7-10m/23-33ft)  
**House Thermal Mass Level:** (A) Light, wood frame  
**Effective mass fraction** 1.000

**Occupants :** 2 Adults for 50.0% of the time  
1 Children for 50.0% of the time  
0 Infants for 0.0% of the time

**Sensible Internal Heat  
Gain From Occupants:** 2.00 kWh/day

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## HOUSE TEMPERATURES

### Heating Temperatures

<b>Main Floor</b>	<b>Daytime Setpoint:</b>	21.0 °C
	<b>Nighttime Setpoint:</b>	18.0 °C
	<b>Nighttime Setback Duration:</b>	8.0 Hours
	<b>24 Hour Average:</b>	20.0 °C
<b>Basement</b>	<b>Setpoint:</b>	19.0 °C
	<b>TEMP. Rise from 20.0 °C:</b>	5.5 °C

**Cooling Temperature: Main Floor + 25.00 °C  
Basement:**

**Basement is- Heated:**Yes **Cooled:** Yes **Separate T/S:** Yes  
**Fraction of internal gains released in basement :** 0.150

### Indoor design temperatures for equipment sizing

<b>Heating:</b>	22.0 °C
<b>Cooling:</b>	24.0 °C

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## WINDOW CHARACTERISTICS

Label	Location	#	Overhang Width (m)	Header Height (m)	Tilt deg	Curtain Factor	Shutter (RSI)
<b>South</b>							
<b>bed2</b>	Main Fl Walls	5	0.91	0.13	90.0	1.00	0.00
<b>bed2 copy</b>	Main Fl Walls	1	0.91	0.13	90.0	1.00	0.00
<b>bed3 copy</b>	Main Fl Walls	1	0.91	0.13	90.0	1.00	0.00
<b>bed4</b>	deep base	1	0.61	0.61	90.0	1.00	0.00
<b>m din</b>	deep base	2	1.07	3.40	90.0	1.00	0.00
<b>m fam</b>	deep base	1	1.83	0.18	90.0	1.00	0.00
<b>m foyerSL</b>	deep base	4	2.31	0.23	90.0	1.00	0.00
<b>m foyerTR</b>	deep base	1	2.31	0.23	90.0	1.00	0.00
<b>m liv copy</b>	deep base	1	1.42	0.20	90.0	1.00	0.00
<b>m morn</b>	deep base	4	0.91	3.45	90.0	1.00	0.00
<b>rec</b>	deep base	1	2.77	0.30	90.0	1.00	0.00

**East**

<b>drwin</b>	den	1	0.91	0.81	90.0	1.00	0.00
<b>den</b>	Main Fl Walls	1	0.91	0.13	90.0	1.00	0.00
<b>m liv TR</b>	Main Fl Walls	1	0.00	0.00	90.0	1.00	0.00
<b>m liv</b>	deep base	1	0.61	3.45	90.0	1.00	0.00
<b>m liv copy</b>	deep base	2	0.00	0.00	90.0	1.00	0.00

**North**

<b>dress</b>	Main Fl Walls	1	0.91	0.41	90.0	1.00	0.00
<b>dress</b>	Main Fl Walls	3	0.91	0.41	90.0	1.00	0.00
<b>ens</b>	Main Fl Walls	1	0.91	0.41	90.0	1.00	0.00
<b>stair</b>	Main Fl Walls	1	0.91	0.41	90.0	1.00	0.00

**West**

<b>drwin copy</b>	mb	3	0.91	1.42	90.0	1.00	0.00
<b>mbTR</b>	Main Fl Walls	1	0.91	0.76	90.0	1.00	0.00
<b>retreat copy</b>	Main Fl Walls	2	0.91	0.13	90.0	1.00	0.00
<b>m fam copy</b>	deep base	2	0.91	0.35	90.0	1.00	0.00
<b>m morn copy</b>	deep base	1	0.91	3.45	90.0	1.00	0.00

<b>Label</b>	<b>Type</b>	<b>#</b>	<b>Window Width (m)</b>	<b>Window Height (m)</b>	<b>Total Area (m<sup>2</sup>)</b>	<b>Window RSI</b>	<b>SHGC</b>	<b>ER*</b>
<b>South</b>								
<b>bed2</b>	BPP U1.42 SHGC 0.18 Code 8	5	0.91	2.44	11.15	0.704	0.1562	17.8
<b>bed2 copy</b>	BPP U1.42 SHGC 0.18 Code 9	1	4.47	3.35	14.99	0.704	0.1716	18.7
<b>bed3 copy</b>	BPP U1.42 SHGC 0.18 Code 10	1	2.74	2.74	7.53	0.704	0.1683	18.5
<b>bed4</b>	BPP	1	1.83	1.83	3.34	0.704	0.1626	18.0

	U1.42 SHGC 0.18 Code 23								
<b>m din</b>	BPP	2	3.05	3.05	18.58	0.704	0.1695	18.6	
	U1.42 SHGC 0.18 Code 24								
<b>m fam</b>	BPP	1	4.47	3.05	13.63	0.704	0.1711	18.7	
	U1.42 SHGC 0.18 Code 25								
<b>m foyerSL</b>	BPP	4	0.69	3.05	8.36	0.704	0.1516	17.5	
	U1.42 SHGC 0.18 Code 27								
<b>m foyerTR</b>	BPP	1	0.91	0.61	0.56	0.704	0.1383	15.1	
	U1.42 SHGC 0.18 Code 28								
<b>m liv copy</b>	BPP	1	2.74	3.05	8.36	0.704	0.1689	18.5	
	U1.42 SHGC 0.18 Code 31								
<b>m morn</b>	BPP	4	1.22	2.74	13.38	0.704	0.1611	18.1	
	U1.42 SHGC 0.18 Code 32								
<b>rec</b>	BPP	1	2.74	2.74	7.53	0.704	0.1683	18.5	
	U1.42 SHGC 0.18 Code 34								
<b>East drwin</b>	BPP	1	0.66	1.78	1.17	0.704	0.1475	16.6	
	U1.42 SHGC 0.18								
<b>den</b>	BPP	1	0.91	0.71	0.65	0.704	0.1417	15.6	
	U1.42 SHGC 0.18 Code 11								
<b>m liv TR</b>	BPP	1	1.32	0.61	0.81	0.704	0.1429	15.9	
	U1.42 SHGC 0.18 Code 15								
<b>m liv</b>	BPP	1	1.83	2.59	4.74	0.704	0.1651	18.2	

	U1.42 SHGC 0.18 Code 29							
<b>m liv copy</b>	BPP U1.42 SHGC 0.18 Code 30	2	0.91	2.74	5.02	0.704	0.1568	17.8
<b>North dress</b>	BPP U1.42 SHGC 0.18 Code 12	1	0.61	1.22	0.74	0.704	0.1420	15.8
<b>dress</b>	BPP U1.42 SHGC 0.18 Code 13	3	0.91	1.52	4.18	0.704	0.1526	17.5
<b>ens</b>	BPP U1.42 SHGC 0.18 Code 14	1	1.52	2.44	3.72	0.704	0.1630	18.1
<b>stair</b>	BPP U1.42 SHGC 0.18 Code 18	1	4.11	3.35	13.80	0.704	0.1713	18.7
<b>West drwin copy</b>	BPP U1.42 SHGC 0.18 Code 7	3	0.76	1.78	4.06	0.704	0.1506	17.4
<b>mbTR</b>	BPP U1.42 SHGC 0.18 Code 16	1	1.83	0.61	1.11	0.704	0.1457	16.4
<b>retreat copy</b>	BPP U1.42 SHGC 0.18 Code 17	2	0.91	2.44	4.46	0.704	0.1562	17.7
<b>m fam copy</b>	BPP U1.42 SHGC 0.18 Code 26	2	0.91	2.74	5.02	0.704	0.1568	17.8
<b>m morn copy</b>	BPP U1.42 SHGC 0.18	1	1.83	3.05	5.57	0.704	0.1660	18.3

## Code 33

\*ER Window Energy Rating (ER 2009) estimated for actual dimensions, and Air tightness type: CSA - A3;  
Leakage rate = 0.50 L/s.m<sup>2</sup>

Above grade fraction of wall area occupied by windows: 34.1 %

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**USER-DEFINED WINDOW CODES SCHEDULE**

<b>Code</b>	<b>Description</b>	<b>Window Type</b>
<b>BPP U1.42 SHGC 0.18 Code 8</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP U1.42 SHGC 0.18 Code 9</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP U1.42 SHGC 0.18 Code 10</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP U1.42 SHGC 0.18 Code 23</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP U1.42 SHGC 0.18 Code 24</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP U1.42 SHGC 0.18 Code 25</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP U1.42 SHGC 0.18 Code 27</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP U1.42 SHGC 0.18 Code 28</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP</b>	BPP U1.42 SHGC 0.18	Hinged

<b>U1.42 SHGC 0.18 Code 31</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP U1.42 SHGC 0.18 Code 32</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP U1.42 SHGC 0.18 Code 34</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP U1.42 SHGC 0.18 Code 11</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP U1.42 SHGC 0.18 Code 15</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP U1.42 SHGC 0.18 Code 29</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP U1.42 SHGC 0.18 Code 30</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP U1.42 SHGC 0.18 Code 12</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP U1.42 SHGC 0.18 Code 13</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP U1.42 SHGC 0.18 Code 14</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP U1.42 SHGC</b>	BPP U1.42 SHGC 0.18	Hinged



<b>0.18</b> <b>Code 18</b>		
<b>BPP</b> <b>U1.42</b> <b>SHGC</b> <b>0.18</b> <b>Code 7</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP</b> <b>U1.42</b> <b>SHGC</b> <b>0.18</b> <b>Code 16</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP</b> <b>U1.42</b> <b>SHGC</b> <b>0.18</b> <b>Code 17</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP</b> <b>U1.42</b> <b>SHGC</b> <b>0.18</b> <b>Code 26</b>	BPP U1.42 SHGC 0.18	Hinged
<b>BPP</b> <b>U1.42</b> <b>SHGC</b> <b>0.18</b> <b>Code 33</b>	BPP U1.42 SHGC 0.18	Hinged

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### **USER-DEFINED WINDOW CODES: DATA**

<b>Code</b>	<b>RSI - Centre of Glass</b>	<b>RSI - Edge of Glass</b>	<b>RSI - Frame</b>	<b>Frame Ht mm</b>	<b>Centre of Glass SHGC</b>
<b>BPP</b> <b>U1.42</b> <b>SHGC</b> <b>0.18</b> <b>Code 8</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>BPP</b> <b>U1.42</b> <b>SHGC</b> <b>0.18</b> <b>Code 9</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>BPP</b> <b>U1.42</b> <b>SHGC</b> <b>0.18</b> <b>Code 10</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>BPP</b> <b>U1.42</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>

<b>SHGC</b> <b>0.18</b> <b>Code 23</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b> <b>0.18</b> <b>Code 24</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b> <b>0.18</b> <b>Code 25</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b> <b>0.18</b> <b>Code 27</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b> <b>0.18</b> <b>Code 28</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b> <b>0.18</b> <b>Code 31</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b> <b>0.18</b> <b>Code 32</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b> <b>0.18</b> <b>Code 34</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b> <b>0.18</b> <b>Code 11</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b> <b>0.18</b> <b>Code 15</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b> <b>0.18</b>					

<b>Code 29</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b>					
<b>0.18</b>					
<b>Code 30</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b>					
<b>0.18</b>					
<b>Code 12</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b>					
<b>0.18</b>					
<b>Code 13</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b>					
<b>0.18</b>					
<b>Code 14</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b>					
<b>0.18</b>					
<b>Code 18</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b>					
<b>0.18</b>					
<b>Code 7</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b>					
<b>0.18</b>					
<b>Code 16</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b>					
<b>0.18</b>					
<b>Code 17</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b>					
<b>0.18</b>					
<b>Code 26</b>					
<b>BPP</b>	<b>0.704</b>	<b>0.704</b>	<b>0.704</b>	<b>50.8</b>	<b>0.180</b>
<b>U1.42</b>					
<b>SHGC</b>					
<b>0.18</b>					
<b>Code 33</b>					

**BUILDING PARAMETER DETAILS****CEILING COMPONENTS**

	<b>Construction Type</b>	<b>Code Type</b>	<b>Roof Slope</b>	<b>Heel Ht. (m)</b>	<b>Section Area (m<sup>2</sup>)</b>	<b>R. Value (RSI)</b>
<b>Base flat F1c</b>	Flat	BP F1c R26sf suspslab	0.000/12	0.25	9.10	5.14
<b>R1 Upper Ceiling</b>	Attic/hip	2403J01000	3.996/12	0.15	178.28	6.79
<b>main f2b</b>	Flat	BP F2b R28.6sf suspslab	0.000/12	0.25	10.03	5.60

**CEILING CODE SCHEDULE**

<b>Name</b>	<b>Internal Code</b>	<b>Description (Structure, typ/size, Spacing, Insull, 2, Int., Sheathing, Exterior, Studs)</b>
<b>2403J01000</b>	2403J01000	Truss, 38x89 mm (2x4 in) Attic truss, 600 mm (24 in), RSI 7.04 @ 279 mm (R 40 @ 11.0") batt, None, 12 mm (0.5 in) gypsum board, N/A, N/A, N/A

**MAIN WALL COMPONENTS**

<b>Label</b>	<b>Lintel Type</b>	<b>Fac. Dir</b>	<b>Number of Corn.</b>	<b>Number of Inter.</b>	<b>Height (m)</b>	<b>Perim. (m)</b>	<b>Area (m<sup>2</sup>)</b>	<b>R. Value (RSI)</b>
<b>Main FI Walls Type: 1211301511</b>	101	N/A	12	9	3.05	63.47	193.47	2.56
<b>vault Type: 1211301511</b>	101	N/A	4	0	0.61	20.78	12.66	2.70

**WALL CODE SCHEDULE**

<b>Name</b>	<b>Internal Code</b>	<b>Description (Structure, typ/size, Spacing, Insull, 2, Int., Sheathing, Exterior, Studs)</b>
<b>1211301511</b>	1211301511	Wood frame, 38x140 mm (2x6 in), 400 mm (16 in), RSI 3.52 @ 152 mm (R 20 @ 6.0") batt, None, 12 mm (0.5 in) gypsum board, Plywood/Particle board 12.7 mm (1/2 in), Wood (lapped), 3 studs

**EXPOSED FLOORS**

<b>Label</b>	<b>Floor Code Type</b>	<b>Area (m<sup>2</sup>)</b>	<b>R. Value (RSI)</b>
<b>2</b>	3511508710	8.36	5.87
<b>m</b>	3511508760	34.19	5.69

**EXPOSED FLOOR SCHEDULE**

<b>Name</b>	<b>Internal Code</b>	<b>Description (Structure, typ/size, Spacing, Insull, 2, Int., Sheathing, Exterior, Studs)</b>
<b>3511508710</b>	3511508710	Composite wood joist, 38x302 mm (2x11.875 in), 400 mm (16 in), RSI 4.93 @ 216 mm (R 28 @ 8.5") batt, None, Carpet & underpad, Plywood/Particle board

18.5 mm (3/4 in), Wood (lapped), No

**3511508760** 3511508760 Composite wood joist, 38x302 mm (2x11.875 in), 400 mm (16 in), RSI 4.93 @ 216 mm (R 28 @ 8.5") batt, None, Carpet & underpad, Plywood/Particle board 18.5 mm (3/4 in), Stucco, No

**DOORS**

Label	Type	Height (m)	Width (m)	Gross Area (m <sup>2</sup> )	R. Value (RSI)
den Loc: Main FI Walls	Steel Medium density spray foam core	2.79	0.97	2.70	1.14
mb Loc: Main FI Walls	Solid wood	2.18	1.88	4.11	0.39
foyer Loc: deep base	Steel Medium density spray foam core	2.49	0.97	2.40	1.14
gar copy Loc: deep base	Steel Medium density spray foam core	2.18	0.97	2.11	1.14
lower Loc: deep base	Steel Medium density spray foam core	2.49	0.97	2.40	1.14
spice Loc: deep base	Steel Medium density spray foam core	2.49	0.97	2.40	1.14

**USER-DEFINED STRUCTURE CODES SCHEDULE**

Name	Description
21BP F1c R26sf suspslab	BP F1c R26sf suspslab
21BP F2b R28.6sf suspslab	BP F2b R28.6sf suspslab
11BP 2A pony	BP 2A pony

**FOUNDATIONS**

**Foundation Name:** deep base  
**Foundation Type:** Basement  
**Data Type:** Library

**Volume:** 695.9 m<sup>3</sup>  
**Opening to Main Floor:** 8.64 m<sup>2</sup>

**Total Wall Height:** 4.32 m  
**Depth Below Grade:** 2.83 m

**Non-Rectangular**  
**Floor Perimeter:** 64.45 m  
**Floor Area:** 161.00 m<sup>2</sup>

**Interior wall type:** User specified  
**Exterior wall type:** User specified  
**Number of corners :** 16  
**Lintel type:** 101  
**Added to slab type :** N/A  
**Floors Above** 4511008710  
**Found.:**

**R-value:** 2.38 RSI  
**R-Value:** 0.00 RSI  
**R-Value:** 1.76 RSI  
**R-Value:** 1.06 RSI

**Exposed areas for:** deep base  
**Exposed Perimeter:** 64.45 m

Configuration: BCIB\_3  
 - concrete walls and floor  
 - interior surface of wall insulated over full-height  
 - sub-surface of floor slab insulated with a 1.0 m (3 ft) strip around perimeter  
 - any first storey construction type

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## FOUNDATION CODE SCHEDULE

### Floors Above Foundation

Name	Internal Code	Description (Structure, typ/size, Spacing, Insul1, 2, Int., Sheathing, Exterior, Drop Framing)
4511008710	4511008710	Composite wood joist, 38x302 mm (2x11.875 in), 400 mm (16 in), None, None, Carpet & underpad, Plywood/Particle board 18.5 mm (3/4 in), 12 mm (0.5 in) Gypsum board, No

### PONY WALL COMPONENTS

Label	Lintel Type	Fac. Dir	Number of Corn.	Number of Inter.	Height (m)	Perim. (m)	Area (m <sup>2</sup> )	R. Value (RSI)
deep base Type: BP 2A pony	101	N/A	16	2	2.41	64.45	155.19	2.10

### Pony Wall Code Schedule

Name	Internal Code	Description (Structure, typ/size, Spacing, Insul1, 2, Int., Sheathing, Exterior, Studs)
BP 2A pony	11BP 2A pony	38x64 mm (2x3 in) wood, 400 mm (16 in), N/A, Vermiculite, N/A, Gypsum + Non insul. strapping, N/A, N/A, N/A

### FOUNDATION FLOOR HEADER COMPONENTS

Label	Lintel Type	Fac. Dir	Number of Corn.	Number of Inter.	Height (m)	Perim. (m)	Area (m <sup>2</sup> )	R. Value (RSI)
Floor Header - b copy (Location:deep base) Type: 1800300510	N/A	N/A	4	4	0.33	56.72	18.67	3.93

### Foundation Floor Header Code Schedule

Name	Internal Code	Description (Structure, typ/size, Spacing, Insul1, 2, Int., Sheathing, Exterior, Studs)
1800300510	1800300510	Floor header, N/A, N/A, RSI 3.52 @ 152 mm (R 20 @ 6.0") batt, None, None, Plywood/Particle board 12.7 mm (1/2 in), 12 mm (0.5 in) Gypsum board, No

### Lintel Code Schedule

Name	Code	Description ( Type, Material, Insulation )
101	101	Double, Wood, Same as wall framing cavity

#### ROOF CAVITY INPUTS

<b>Gable Ends</b>		<b>Total Area:</b>	0.00 m <sup>2</sup>
<b>Sheathing Material</b>	Plywood/Part. bd 9.5 mm (3/8 in)		0.08 RSI
<b>Exterior Material:</b>	Hollow metal/vinyl cladding		0.11 RSI
<b>Sloped Roof</b>		<b>Total Area:</b>	187.91 m <sup>2</sup>
<b>Sheathing Material</b>	Plywood/Part. bd 12.7 mm (1/2 in)		0.11 RSI
<b>Exterior Material:</b>	Asphalt shingles		0.08 RSI
<b>Total Cavity Volume:</b>	161.8 m <sup>3</sup>	<b>Ventilation Rate:</b>	0.50 ACH/hr

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**BUILDING ASSEMBLY DETAILS**

Label	Construction Code	Nominal (RSI)	System (RSI)	Effective (RSI)
<b>CEILING COMPONENTS</b>				
Base flat F1c	BP F1c R26sf suspslab	4.58	5.14	5.14
R1 Upper Ceiling	2403J01000	7.07	7.11	6.79
main f2b	BP F2b R28.6sf suspslab	5.04	5.60	5.60
<b>MAIN WALL COMPONENTS</b>				
Main FI Walls	1211301511	3.24	2.55	2.56
vault	1211301511	3.24	2.70	2.70
<b>EXPOSED FLOORS</b>				
2	3511508710	4.93	5.87	5.87
m	3511508760	4.93	5.69	5.69
<b>FLOORS ABOVE BASEMENTS</b>				
deep base	4511008710	0.00	1.06	1.06

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**BUILDING PARAMETERS SUMMARY**
**ZONE 1 : Above Grade**

Component	Area m <sup>2</sup> Gross	Area m <sup>2</sup> Net	Effective (RSI)	Heat Loss MJ	% Annual Heat Loss
Ceiling	197.41	197.41	6.62	7723.31	4.56
Main Walls	206.14	136.21	2.57	15223.91	8.98
Doors	16.12	10.88	1.13	3971.74	2.34
Exposed floors	42.55	42.55	5.73	2152.82	1.27
South Windows	33.66	33.66	0.70	15064.58	8.88
East Windows	2.63	2.63	0.70	1176.85	0.69
North Windows	22.44	22.44	0.70	10040.74	5.92
West Windows	9.64	9.64	0.70	4313.57	2.54
<b>ZONE 1 Totals:</b>				<b>59667.52</b>	<b>35.19</b>

**INTER-ZONE Heat Transfer : Floors Above Basement**

Area m <sup>2</sup> Gross	Area m <sup>2</sup> Net	Effective (RSI)	Heat Loss MJ
161.00	161.00	1.057	14460.73

**ZONE 2 : Basement**

Component	Area m <sup>2</sup> Gross	Area m <sup>2</sup> Net	Effective (RSI)	Heat Loss MJ	% Annual Heat Loss
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<b>Walls above grade</b>	95.87	95.87	-	13466.98	7.94
<b>South windows</b>	73.73	73.73	0.70	30244.01	17.84
<b>East windows</b>	9.75	9.75	0.70	4001.20	2.36
<b>West windows</b>	10.59	10.59	0.70	4344.16	2.56
<b>Basement floor header</b>	18.67	18.67	3.93	1590.77	0.94
<b>Pony walls</b>	155.19	51.79	2.10	8259.42	4.87
<b>Below grade foundation</b>	343.69	343.69	-	25660.93	15.13
<b>ZONE 2 Totals:</b>				<b>87567.48</b>	<b>51.65</b>

#### Air Leakage and Mechanical Ventilation

<b>House Volume</b>	<b>Air Change</b>	<b>Heat Loss MJ</b>	<b>% Annual Heat Loss</b>
1697.41 m <sup>3</sup>	0.110 ACH	22315.953	13.16

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## AIR LEAKAGE AND MECHANICAL VENTILATION

**Building Envelope Surface Area:** 1059.52 m<sup>2</sup>

**Air Leakage Test Results at 50 Pa.** 2.15 ACH  
(0.2 in H<sub>2</sub>O) =

**Equivalent Leakage Area @ 10 Pa** 1315.67 cm<sup>2</sup>  
=

<b>Terrain Description</b>			<b>Height (m)</b>
@ Weather Station :	Open flat terrain, grass	Anemometer:	10.0
@ Building site :	Suburban, forest	Height of the highest ceiling:	10.4

### Local Shielding:

**Walls:** Heavy

**Flue :** Light

### Leakage Fractions-

**Ceiling:** 0.300

**Walls:** 0.500

**Floors:** 0.200

**Normalized Leakage Area @ 10 Pa:** 1.2417 cm<sup>2</sup>/m<sup>2</sup>

**Estimated Airflow to cause a 5 Pa Pressure Difference:** 209 L/s

**Estimated Airflow to cause a 10 Pa Pressure Difference:** 328 L/s

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## F326 VENTILATION REQUIREMENTS

Kitchen, Living Room, Dining Room	3 rooms @ 5.0 L/s: 15.0 L/s
Bedroom	1 rooms @ 10.0 L/s: 10.0 L/s
Bedroom	2 rooms @ 5.0 L/s: 10.0 L/s
Bathroom	3 rooms @ 5.0 L/s: 15.0 L/s
Basement Rooms	10.0 L/s

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## SECONDARY FANS & OTHER EXHAUST APPLIANCES

	<b>Control</b>	<b>Supply (L/s)</b>	<b>Exhaust (L/s)</b>
<b>Other Fans</b>	Continuous	0.00	17.66

Dryer	Continuous	-	1.49
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Dryer is vented outdoors

Rated Fan Power	13.42 Watts
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## **NEW ERS VENTILATION DATA**

### **Whole House Systems**

<b>Air Distribution/circulation type:</b>	Forced air heating ductwork
<b>Air Distribution/circulation fan power:</b>	100.00 Watts
<b>Operation schedule:</b>	1440.00 min/day

<b>System # 1 Type:</b>	Bathroom	
<b>Manufacturer:</b>		
<b>Model:</b>		
<b>Airflow Supply Rate:</b> 0.00 L/s	<b>Exhaust:</b> 49.08 L/s	<b>Fan Power:</b> 37.30 Watts

### **Supplementary Systems**

<b>System # 1 Type:</b>	Range hood	
<b>Manufacturer:</b>		
<b>Model:</b>		
<b>Airflow Supply Rate:</b> 0.00 L/s	<b>Exhaust:</b> 74.99 L/s	<b>Fan Power:</b> 57.00 Watts
<b>Operation schedule:</b>	72.00 min/day	

<b>System # 2 Type:</b>	Dryer	
<b>Manufacturer:</b>		
<b>Model:</b>		
<b>Airflow Supply Rate:</b> 0.00 L/s	<b>Exhaust:</b> 38.00 L/s	<b>Fan Power:</b> 0.00 Watts
<b>Operation schedule:</b>	56.53 min/day	

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## **AIR LEAKAGE AND MECHANICAL VENTILATION SUMMARY**

<b>F326 Required continous ventilation:</b>	60.000 L/s (0.13 ACH)
<b>Other Continuous Supply Flow Rates:</b>	0.000 L/s (0.00 ACH)
<b>Other Continuous Exhaust Flow Rates:</b>	17.656 L/s (0.04 ACH)
<b>Total house ventilation is</b>	<b>Balanced</b>
<b>Gross Air Leakage and Mechanical</b>	16270.006 MJ

<b>Ventilation Energy Load:</b>	
<b>Seasonal Heat Recovery Ventilator Efficiency:</b>	0.000 %
<b>Estimated Ventilation Electrical Load: Heating Hours:</b>	0.000 MJ
<b>Estimated Ventilation Electrical Load: Non-Heating Hours:</b>	0.000 MJ
<b>Net Air Leakage and Mechanical Ventilation Load:</b>	22315.953 MJ

## SPACE HEATING SYSTEM

**PRIMARY Space Heating Fuel:** Electricity  
**Space Heating Equipment:** Air Source Heat Pump  
**Manufacturer:** Carrier  
**Model:** 25HNB660A320/CNPVP6024ALA/FE4A

**Capacity at 8.3 °C:** 33.6 kW  
**HSPF at 8.3 °C:** 7.60  
**COP at 8.3 °C:** 3.64  
**Crankcase Heater Power:** 60.00 watts  
**Heat Pump Temperature Cut-Off:** Balance point

**SECONDARY Heating Fuel:** Natural Gas  
**Equipment:** Condensing furnace/boiler  
**Manufacturer:** Carrier  
**Model:** 59TN6A100V211122  
**Specified Output Capacity:** 28.43 kW

**AFUE:** 96.10  
**Steady State Efficiency:** 97.19  
**Fan Mode:** Auto  
**ECM Motor:** Yes  
**Low Speed Fan Power:** 0 watts  
**High Speed Fan Power:** 967 watts

### Supplementary Heating - System # 1

**Fuel type:** Natural Gas  
**Equipment:** Fireplace with spark ignit. (sealed)  
**Manufacturer:**  
**Model:**  
**Description:**  
**Year built:** 2000-

**Usage:** Never  
**Location** Main **Approx. Floor** 12.0 m<sup>2</sup>  
**Heated:** Floors **Area:**

**Rated output heating capacity:** 2.0 kW  
**Steady state efficiency (%) :** 65.0

### Supplementary Heating - System # 2

**Fuel type:** Natural Gas

**Equipment:** Fireplace with spark ignit. (sealed)  
**Manufacturer:**  
**Model:**  
**Description:**  
**Year built:** 2000-

**Usage:** Never  
**Location Heated:** Main Floors **Approx. Floor Area:** 12.0 m<sup>2</sup>

**Rated output heating capacity:** 2.0 kW  
**Steady state efficiency (%) :** 65.0

### ***AIR CONDITIONING SYSTEM***

**System Type:** Central split system  
**Manufacturer:**  
**Model:**  
**Capacity:** 21072 Watts  
**SEER** 15.40 **Rated COP** 3.199  
**Sensible Heat Ratio:** 0.76  
**Indoor Fan Flow Rate:** 1421.88 L/s **Fan Power (watts)** 1101.96  
**Ventilator Flow Rate:** 0.00 L/s **Crankcase Heater Power (watts):** 60.00  
**Fraction of windows Openable:** 0.000  
**Cooling system capacity sizing factor:** 1.000  
**Economizer control:** N/A **Indoor Fan Operation:** Auto

**Air Conditioner is integrated with the Heating System**

### ***DOMESTIC WATER HEATING SYSTEM***

**PRIMARY Water Heating Fuel:** Natural gas  
**Water Heating Equipment:** Instantaneous (condensing)  
**Energy Factor:** 0.970  
**Manufacturer:** Navien  
**Model:** NPE-240A  
**Pilot Energy :** 0.0 MJ/day **Flue Diameter:** 0.0 mm

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## ***ANNUAL DOMESTIC WATER HEATING SUMMARY***

**Daily Hot Water Consumption:** 187.6 Litres  
**Hot Water Temperature:** 55.0 °C  
**Estimated Domestic Water Heating Load:** 12825 MJ

**Primary Domestic Water Heating Energy Consumption:** 13058 MJ  
**Primary System Seasonal Efficiency:** 98.2%

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## ***ANNUAL SPACE HEATING SUMMARY***

**Gross Space Heat Loss:** 169551 MJ  
**Gross Space Heating Load:** 169551 MJ  
**Usable Internal Gains:** 24871 MJ  
**Usable Internal Gains Fraction:** 14.7 %  
**Usable Solar Gains:** 44104 MJ  
**Usable Solar Gains Fraction:** 26.0 %  
**Auxiliary Energy Required:** 100598 MJ

**Space Heating System Load:** 100423 MJ  
**Heat Pump and Furnace Annual COP:** 1.364  
**Heat Pump Annual Energy Consumption:** 34634 MJ  
**Furnace/Boiler Annual Energy Consumption:** 392 MJ  
**Annual Space Heating Energy Consumption:** 35025 MJ

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## ***DESIGN SPACE HEATING AND COOLING LOADS***

**Design Heat Loss\* at -7.0 °C (9.86 Watts / m3):** 16733 Watts  
**Design Cooling Load\* for July at (28.0 ° C):** 17442 Watts

\* Please refer to notes at the end of this report.

## **ANNUAL SPACE COOLING SUMMARY**

**Design Sensible Heat Ratio:** 0.769  
**Estimated Annual Space Cooling Energy:** 287.49 kWh  
**Seasonal COP ( May to October):** 1.966

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## **BASE LOADS SUMMARY**

	<b>kwh/day</b>	<b>Annual kWh</b>
<b>Interior Lighting</b>	2.60	949.00
<b>Appliances</b>	6.30	2299.40
<b>Other</b>	9.70	3540.50
<b>Exterior Use</b>	0.90	328.50
<b>HVAC Fans</b>		
<b>HRV/Exhaust</b>	0.32	117.54
<b>Space Heating</b>	0.00	1.44
<b>Space Cooling</b>	0.12	43.43
<b>Total Average Electrical Load</b>	19.94	7279.81

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## **FAN OPERATION SUMMARY (kWh)**

<b>Hours</b>	<b>HRV/Exhaust Fans</b>	<b>Space Heating</b>	<b>Space Cooling</b>
<b>Heating</b>	96.1	1.4	0.0
<b>Neither</b>	12.7	0.0	0.0
<b>Cooling</b>	8.8	0.0	43.4
<b>Total</b>	117.5	1.4	



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## ENERGY CONSUMPTION SUMMARY REPORT

<b>Estimated Annual Space Heating Energy Consumption</b>	= 35030.42 MJ	= 9730.67 kWh
<b>Ventilator Electrical Consumption: Heating Hours</b>	= 0.00 MJ	= 0.00 kWh
<b>Estimated Annual DHW Heating Energy Consumption</b>	= 13058.21 MJ	= 3627.28 kWh
<b>ESTIMATED ANNUAL SPACE + DHW ENERGY CONSUMPTION</b>	= 48088.64 MJ	= 13357.95 kWh
<b>Estimated Greenhouse Gas Emissions</b>	1.053 tonnes/year	

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## ESTIMATED ANNUAL FUEL CONSUMPTION SUMMARY

Fuel	Space Heating	Space Cooling	DHW Heating	Baseloads	Ventilation	Total
<b>Natural Gas (m3)</b>	10.5	0.0	350.5	0.0	0.0	361.0
<b>Electricity (kWh)</b>	9621.9	287.5	0.0	7117.4	117.5	17144.4

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## ESTIMATED ANNUAL FUEL CONSUMPTION COSTS

Fuel Costs Library = Embedded

RATE	Electricity (BCHydro)	Natural Gas (LwrMain)	Oil (BC Oil)	Propane (BCPropan)	Wood (BC ave)	Total
\$	1462.42	264.74	0.00	0.00	0.00	1727.16

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## Fuel Costs Library Listing

Filename = Embedded

**Record # 1**                      Fuel: Electricity  
Rate ID = BCHydro              Lower mainland hydro rated

Rate Block	kWhr	Dollars Per kWhr	Charge (\$)
Minimum	0.0		4.340
1	675.0	0.0667	
2	99999.0	0.0962	

<b>Record # 2</b>	Fuel: Natural Gas			
Rate ID = LwrMain	Lower Mainland			
Rate Block		Dollars		Charge
	GJ	Per GJ		(\$)
Minimum	0.0			11.840
1	99999.0	9.1200		
<b>Record # 3</b>	Fuel: Oil			
Rate ID = BC Oil	Oil rate block			
Rate Block		Dollars		Charge
	Litre	Per Litre		(\$)
Minimum	0.0			1.000
1	99999.0	1.0000		
<b>Record # 4</b>	Fuel: Propane			
Rate ID = BCPropan	BC average propane cost			
Rate Block		Dollars		Charge
	Litre	Per Litre		(\$)
Minimum	1.0			10.000
1	99999.0	0.6300		
<b>Record # 5</b>	Fuel: Wood			
Rate ID = BC ave	Cord Rate			
Rate Block		Dollars		Charge
	Cord	Per Cord		(\$)
Minimum	0.0			0.000
1	99999.0	175.0000		

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**MONTHLY ENERGY PROFILE**

Month	Energy Load (MJ)	Internal Gains (MJ)	Solar Gains (MJ)	Aux. Energy (MJ)	HRV Eff. %
Jan	24047.3	2150.4	2781.7	19115.2	0.0
Feb	19888.3	1937.7	3410.4	14540.2	0.0
Mar	19144.0	2150.1	4542.8	12451.1	0.0
Apr	14856.1	2094.4	4379.1	8382.5	0.0
May	10771.2	2183.0	4221.8	4366.4	0.0
Jun	7006.9	2130.3	3731.6	1145.0	0.0
Jul	4952.5	1856.8	2989.5	115.9	0.0
Aug	4946.5	1745.9	3147.5	63.7	0.0
Sep	7805.7	2144.1	4805.0	857.8	0.0
Oct	13646.1	2201.5	4566.2	6878.4	0.0
Nov	18999.7	2112.2	2933.3	13954.2	0.0
Dec	23486.6	2164.0	2594.8	18727.9	0.0
Ann	169550.9	24870.5	44103.6	100598.4	0.0

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**FOUNDATION ENERGY PROFILE**

Month	Heat Loss (MJ)				Total
	Crawl Space	Slab	Basement	Walkout	
Jan	0.0	0.0	9061.4	0.0	9061.4
Feb	0.0	0.0	6859.9	0.0	6859.9
Mar	0.0	0.0	5756.7	0.0	5756.7
Apr	0.0	0.0	3850.6	0.0	3850.6
May	0.0	0.0	1996.3	0.0	1996.3
Jun	0.0	0.0	642.9	0.0	642.9
Jul	0.0	0.0	115.9	0.0	115.9
Aug	0.0	0.0	63.7	0.0	63.7
Sep	0.0	0.0	380.8	0.0	380.8
Oct	0.0	0.0	2704.8	0.0	2704.8
Nov	0.0	0.0	6344.7	0.0	6344.7
Dec	0.0	0.0	8750.5	0.0	8750.5
Ann	0.0	0.0	46528.1	0.0	46528.1

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**FOUNDATION TEMPERATURES & VENTILATION PROFILE**

Month	Temperature (Deg °C)			Air Change Rate		Heat Loss (MJ)
	Crawl Space	Basement	Walkout	Natural	Total	

Jan	0.0	19.0	0.0	0.106	0.146	3704.4
Feb	0.0	19.0	0.0	0.099	0.140	2914.5
Mar	0.0	18.9	0.0	0.090	0.131	2619.6
Apr	0.0	19.0	0.0	0.076	0.117	1863.9
May	0.0	19.1	0.0	0.057	0.098	1164.4
Jun	0.0	19.4	0.0	0.042	0.083	637.4
Jul	0.0	20.1	0.0	0.031	0.072	368.1
Aug	0.0	20.2	0.0	0.029	0.070	351.9
Sep	0.0	19.6	0.0	0.042	0.083	719.7
Oct	0.0	19.0	0.0	0.067	0.108	1625.0
Nov	0.0	18.9	0.0	0.092	0.133	2724.2
Dec	0.0	19.0	0.0	0.105	0.146	3622.6
Ann	0.0	19.3	0.0	0.070	0.110	22316.0

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### **SPACE HEATING SYSTEM PERFORMANCE**

Month	Space Heating Load (MJ)	Furnace Input (MJ)	Pilot Light (MJ)	Indoor Fans (MJ)	Heat Pump Input (MJ)	Total Input (MJ)	System Cop
Jan	19099.9	65.6	0.0	1.1	6747.3	6813.9	2.803
Feb	14538.2	48.0	0.0	0.8	5028.1	5076.9	2.864
Mar	12424.0	43.5	0.0	0.5	4176.8	4220.9	2.943
Apr	8382.8	29.6	0.0	0.3	2746.3	2776.2	3.019
May	4350.6	31.6	0.0	0.2	1390.3	1422.1	3.059
Jun	1144.1	9.1	0.0	0.0	378.9	388.0	2.948
Jul	115.9	5.8	0.0	0.0	174.8	180.6	0.642
Aug	63.7	7.2	0.0	0.0	163.3	170.5	0.374
Sep	848.6	13.7	0.0	0.0	292.5	306.3	2.771
Oct	6864.8	26.6	0.0	0.3	2232.0	2258.9	3.039
Nov	13882.4	45.5	0.0	0.7	4724.0	4770.3	2.910
Dec	18708.4	65.3	0.0	1.2	6579.5	6645.9	2.815
Ann	100423.4	391.5	0.0	5.2	34633.8	35030.4	1.364

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### **AIR CONDITIONING SYSTEM PERFORMANCE**

Month	Sensible Load (MJ)	Latent Load (MJ)	AirCond Energy (kWh)	Fan Energy (kWh)	Ventilator Energy (kWh)	Crankcase Heater (kWh)	Total Energy (kWh)	COP	Av.RH %
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<b>May</b>	39.8	7.1	5.2	1.1	0.0	0.8	7.1	1.8	40.4
<b>Jun</b>	159.0	34.1	21.2	4.3	0.0	0.8	26.3	2.0	41.7
<b>Jul</b>	622.5	149.4	81.5	16.4	0.0	12.3	110.2	1.9	43.0
<b>Aug</b>	649.5	163.1	85.1	17.1	0.0	12.9	115.1	2.0	43.4
<b>Sep</b>	163.1	44.2	22.5	4.6	0.0	1.2	28.3	2.0	43.6
<b>Oct</b>	2.4	0.6	0.4	0.1	0.0	0.2	0.6	1.4	43.2
<b>Ann</b>	1636.4	398.6	215.8	43.4	0.0	28.3	287.5	2.0	43.0

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### **MONTHLY ESTIMATED ENERGY CONSUMPTION BY DEVICE (MJ)**

<b>Month</b>	<b>Space Heating</b>		<b>DHW Heating</b>		<b>Lights &amp;</b>	<b>HRV &amp;</b>	<b>Air</b>
	<b>Primary</b>	<b>Secondary</b>	<b>Primary</b>	<b>Secondary</b>	<b>Appliances</b>	<b>FANS</b>	<b>Conditioner</b>
<b>Jan</b>	6747.3	65.6	1197.9	0.0	2176.2	37.0	0.0
<b>Feb</b>	5028.1	48.0	1094.3	0.0	1965.6	33.3	0.0
<b>Mar</b>	4176.8	43.5	1197.9	0.0	2176.2	36.5	0.0
<b>Apr</b>	2746.3	29.6	1123.1	0.0	2106.0	35.1	0.0
<b>May</b>	1390.3	31.6	1109.6	0.0	2176.2	39.9	21.8
<b>Jun</b>	378.9	9.1	1024.6	0.0	2106.0	50.2	79.2
<b>Jul</b>	174.8	5.8	1021.4	0.0	2176.2	94.9	337.6
<b>Aug</b>	163.3	7.2	1007.8	0.0	2176.2	97.5	352.8
<b>Sep</b>	292.5	13.7	988.5	0.0	2106.0	51.2	85.4
<b>Oct</b>	2232.0	26.6	1058.7	0.0	2176.2	36.5	1.8
<b>Nov</b>	4724.0	45.5	1073.9	0.0	2106.0	35.5	0.0
<b>Dec</b>	6579.5	65.3	1160.6	0.0	2176.2	37.1	0.0
<b>Ann</b>	34633.8	391.5	13058.2	0.0	25622.6	584.7	878.6

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### **ESTIMATED FUEL COSTS (Dollars)**

<b>Month</b>	<b>Electricity</b>	<b>Natural Gas</b>	<b>Oil</b>	<b>Propane</b>	<b>Wood</b>	<b>Total</b>
<b>Jan</b>	223.87	23.36	0.00	0.00	0.00	247.23
<b>Feb</b>	172.20	22.26	0.00	0.00	0.00	194.46
<b>Mar</b>	155.17	23.16	0.00	0.00	0.00	178.33
<b>Apr</b>	115.03	22.35	0.00	0.00	0.00	137.38
<b>May</b>	81.38	22.25	0.00	0.00	0.00	103.63
<b>Jun</b>	54.29	21.27	0.00	0.00	0.00	75.55
<b>Jul</b>	58.81	21.21	0.00	0.00	0.00	80.02
<b>Aug</b>	58.98	21.10	0.00	0.00	0.00	80.07
<b>Sep</b>	52.17	20.98	0.00	0.00	0.00	73.15
<b>Oct</b>	103.25	21.74	0.00	0.00	0.00	124.99

<b>Nov</b>	167.89	22.05	0.00	0.00	0.00	189.94
<b>Dec</b>	219.39	23.02	0.00	0.00	0.00	242.41
<b>Ann</b>	1462.42	264.74	0.00	0.00	0.00	1727.16

**The calculated heat losses and energy consumptions are only estimates, based upon the data entered and assumptions within the program. Actual energy consumption and heat losses will be influenced by construction practices, localized weather, equipment characteristics and the lifestyle of the occupants.**