



File: REEP House (before).HSE
Application Type: General

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Weather Data for TORONTO MET RES STN, ONTARIO

Builder Code: 11W2D00452

Data Entry by: Dave Klassen
Date of entry: 2009-07-20
Company: Waterloo Region Green Solutions

Client name: Region, of Waterloo
Street address: 20 Mill Street

City: Kitchener
Postal code: N2G 2Y3
Region: ON
Telephone: 519-744-6583

Mailing address: 222 Frederick Street
City: Kitchener
Postal Code: N2H 2M8
Region: Ontario

GENERAL HOUSE CHARACTERISTICS

House type: Single Detached
Number of storeys: Two storeys
Plan shape: Rectangular
Front orientation: Southwest
Year House Built: 1920
Wall colour: Default
Roof colour: Medium brown
Soil Condition: Normal conductivity (dry sand, loam, clay)
Water Table Level: Normal (7-10m/23-33ft)

Absorptivity: 0.40
Absorptivity: 0.84

House Thermal Mass Level: (C) Heavy, masonry

Effective mass fraction 1.000

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

Sensible Internal Heat Gain From Occupants: 2.40 kWh/day

HOUSE TEMPERATURES

Heating Temperatures

Main Floor:	21.0 °C
Basement:	19.0 °C
TEMP. Rise from 21.0 °C:	2.8 °C

Basement is- Heated: YES Cooled: NO Separate T/S: NO
 Fraction of internal gains released in basement : 0.150

Indoor design temperatures for equipment sizing

Heating:	22.0 °C
Cooling:	24.0 °C

WINDOW CHARACTERISTICS

Label	Location	#	Overhang Width (m)	Header Height (m)	Tilt deg	Curtain Factor	Shutter (RSI)
South							
Window - 15	Door-01	1	0.00	0.00	90.0	1.00	0.00
Window - 16	Door-02	1	0.00	0.00	90.0	1.00	0.00
Southeast							
Southeast0001	Main floor	1	0.41	2.39	90.0	1.00	0.00
Southeast0002	Main floor	1	0.41	2.39	90.0	1.00	0.00
Southeast0003	Main floor	1	0.41	2.39	90.0	1.00	0.00
Southeast0004	Second level	1	0.41	0.20	90.0	1.00	0.00
Southeast0005	Second level	1	0.41	0.20	90.0	1.00	0.00
Southeast0006	Foundation - 1	1	0.41	5.14	90.0	1.00	0.00
Southeast0007	Foundation - 1	1	0.41	5.14	90.0	1.00	0.00
Northeast							
Northeast0001	Main floor	1	0.41	2.39	90.0	1.00	0.00
Northeast0002	Foundation - 1	1	0.41	5.14	90.0	1.00	0.00
Northwest							
Northwest0001	Main floor	1	0.41	2.39	90.0	1.00	0.00
Northwest0002	Second level	1	0.41	0.20	90.0	1.00	0.00
Southwest							
Southwest0001	Main floor	1	0.41	2.39	90.0	1.00	0.00
Southwest0002	Main floor	1	0.41	2.39	90.0	1.00	0.00
Southwest0003	Second level	1	0.41	0.20	90.0	1.00	0.00
Label	Type	#	Window Width (m)	Window Height (m)	Total Area (m ²)	Window RSI	SHGC
South							
Window - 15	100000	1	0.56	0.86	0.48	0.148	0.7296
Window - 16	100000	1	0.61	0.91	0.56	0.148	0.7387
Southeast							
Southeast0001	200004	1	0.55	0.83	0.46	0.334	0.5921

Southeast0002	200004	1	0.55	0.83	0.46	0.334	0.5921
Southeast0003	200004	1	0.55	0.83	0.46	0.334	0.5921
Southeast0004	200004	1	0.68	1.01	0.69	0.337	0.6213
Southeast0005	200004	1	0.68	1.01	0.69	0.337	0.6213
Southeast0006	100002	1	0.26	0.39	0.10	0.230	0.4804
Southeast0007	100002	1	0.26	0.39	0.10	0.230	0.4804
Northeast							
Northeast0001	200004	1	1.06	1.58	1.67	0.343	0.6694
Northeast0002	100002	1	0.26	0.39	0.10	0.230	0.4804
Northwest							
Northwest0001	200004	1	0.96	1.43	1.37	0.342	0.6605
Northwest0002	200004	1	0.96	1.43	1.37	0.342	0.6605
Southwest							
Southwest0001	200004	1	0.84	1.25	1.05	0.340	0.6470
Southwest0002	200002	1	0.84	1.25	1.05	0.340	0.6470
Southwest0003	200002	1	1.19	1.77	2.11	0.344	0.6791

WINDOW CODE SCHEDULE

Name	Internal Code	Description (Glazings, Coatings, Fill, Spacer, Type, Frame)
100000	100000	Single (SG), Clear, 13 mm Air, Metal, Picture, Aluminum, RE* = -88.517, Eff. RSI= 0.15
200004	200004	Double/double with 1 coat, Clear, 13 mm Air, Metal, Picture, Vinyl, RE* = -16.869, Eff. RSI= 0.34
100002	100002	Single (SG), Clear, 13 mm Air, Metal, Picture, Wood, RE* = -72.451, Eff. RSI= 0.17
200002	200002	Double/double with 1 coat, Clear, 13 mm Air, Metal, Picture, Wood, RE* = -16.869, Eff. RSI= 0.34

* Window Standard Energy Rating estimated for assumed dimensions, and Air tightness type: CSA - A1; Leakage rate = 2.790 m³/hr/m

BUILDING PARAMETER DETAILS

CEILING COMPONENTS

	Construction Type	Code Type	Roof Slope	Heel Ht.(m)	Section Area (m ²)	R. Value (RSI)
Flat	Attic/gable	24110R9000	6.996/12	0.10	39.21	0.90
Sloped	Cathedral	2211009000	6.996/12	0.00	14.86	0.30

CEILING CODE SCHEDULE

Name	Internal Code	Description (Structure, typ/size, Spacing, Insull, 2, Int., Sheathing, Exterior, Studs)
24110R9000	24110R9000	Truss, 38x114 mm (2x5 in) Attic truss, 400 mm (16 in), None, N/A, Lath & plaster, N/A, N/A, N/A
2211009000	2211009000	Wood frame, 38x140 mm (2x6 in), 400 mm (16 in), None, None, Lath & plaster, N/A, N/A, N/A

MAIN WALL COMPONENTS

Label	Lintel Type	Fac. Dir	Number of Corn.	Number of Inter.	Height (m)	Perim. (m)	Area (m ²)	R. Value (RSI)
Main floor Type: 16F0009000	100	N/A	6	4	2.74	28.65	78.60	0.79
Second level Type: 16F0009000	100	N/A	6	4	2.19	28.65	62.88	0.79
MWhdr-02 Type: 1800000540		N/A	4	4	0.23	28.65	6.59	0.91

WALL CODE SCHEDULE

Name	Internal Code	Description (Structure, typ/size, Spacing, Insull, 2, Int., Sheathing, Exterior, Studs)
16F0009000	16F0009000	Solid, N/A, None, None, None, Lath & plaster, None, None, 2 studs
1800000540	1800000540	Floor header, N/A, N/A, None, None, N/A, Plywood/Particle board 12.7 mm (1/2 in), Brick, N/A

DOORS

Label	Type	Height (m)	Width (m)	Gross Area (m ²)	R. Value (RSI)
Door-01 Loc: Main floor	Steel polyurethane core	1.98	0.85	1.68	1.14
Door-02 Loc: Main floor	Solid wood	1.98	0.85	1.68	0.39

FOUNDATIONS

Foundation Name:	Foundation - 1	Volume:	95.7 m ³
Foundation Type:	Basement	Opening to Main Floor:	0.00 m ²
Data Type:	Library		

Total Wall Height:	1.95 m	Non-Rectangular Floor Perimeter:	28.65 m
Depth Below Grade:	1.19 m	Floor Area:	49.05 m ²
Interior wall type:	User specified	R-value:	1.06 RSI
Exterior wall type:	User specified	R-Value:	0.00 RSI
Number of corners :	6		
Lintel type:	Bsmnt Lintel		
Added to slab type :	User specified	R-Value:	0.00 RSI
Floors Above Found.:	4231000660	R-Value:	0.72 RSI

Exposed areas for: Foundation - 1
Exposed Perimeter: 28.65 m

Configuration: BCIN_1
- concrete walls and floor
- interior surface of wall insulated over full-height
- any first storey construction type

FOUNDATION CODE SCHEDULE

Floors Above Foundation

Name	Internal Code	Description (Structure, typ/size, Spacing, Insul1, 2, Int., Sheathing, Exterior, Drop Framing)
4231000660	4231000660	Wood frame, 38x235 mm (2x10 in), 400 mm (16 in), None, None, None, Plywood/Particle board 15.5 mm (5/8 in), Wood, No

BASEMENT FLOOR HEADER COMPONENTS

Label	Lintel Type	Fac. Dir	Number of Corn.	Number of Inter.	Height (m)	Perim. (m)	Area (m ²)	R. Value (RSI)
BWhdr01 Type: 1800000040	N/A	N/A	4	4	0.23	28.65	6.59	0.80

Basement Floor Header Code Schedule

Name	Internal Code	Description (Structure, typ/size, Spacing, Insul1, 2, Int., Sheathing, Exterior, Studs)
1800000040	1800000040	Floor header, N/A, N/A, None, None, None, None, Tile-linoleum, No

Lintel Code Schedule

Name	Code	Description (Type, Material, Insulation)
100	100	Double, Wood, None
Bsmnt Lintel	100	Double, Wood, None

ROOF CAVITY INPUTS

Gable Ends		Total Area:	3.13 m ²
Sheathing Material	Plywood/Part. bd 9.5 mm (3/8 in)		0.08 RSI
Exterior Material:	Hollow metal/vinyl cladding		0.11 RSI
Sloped Roof		Total Area:	36.04 m ²
Sheathing Material	Plywood/Part. bd 12.7 mm (1/2 in)		0.11 RSI

Exterior Material: Asphalt shingles

0.08 RSI

Total Cavity Volume: 12.4 m³

Ventilation Rate:

0.50 ACH/hr

BUILDING ASSEMBLY DETAILS

Label	Construction Code	Nominal (RSI)	System (RSI)	Effective (RSI)
CEILING COMPONENTS				
Flat	24110R9000	0.52	0.90	0.90
Sloped	2211009000	0.00	0.30	0.30
MAIN WALL COMPONENTS				
Main floor	16F0009000	0.00	0.79	0.79
Second level	16F0009000	0.00	0.79	0.79
MWhdr-02	1800000540	0.00	0.91	0.91
FLOORS ABOVE BASEMENTS				
Foundation - 1	4231000660	0.00	0.72	0.72

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

Component	Area m ² Gross	Area m ² Net	Effective (RSI)	Heat Loss MJ	% Annual Heat Loss
Ceiling	54.07	54.07	0.58	19716.84	12.27
Main Walls	148.06	133.32	0.80	66279.81	41.25
Doors	3.37	2.33	0.59	1695.75	1.06
South Windows	1.04	1.04	0.15	3026.73	1.88
Southeast Windows	2.75	2.75	0.34	3521.85	2.19
Northeast Windows	1.67	1.67	0.34	2094.30	1.30
Northwest Windows	2.75	2.75	0.34	3460.59	2.15
Southwest Windows	4.22	4.22	0.34	5308.90	3.30
ZONE 1 Totals:				105104.76	65.42

INTER-ZONE Heat Transfer : Floors Above Basement

Area m ² Gross	Area m ² Net	Effective (RSI)	Heat Loss MJ
49.05	49.05	0.721	3290.21

ZONE 2 : Basement

Component	Area m ² Gross	Area m ² Net	Effective (RSI)	Heat Loss MJ	% Annual Heat Loss
Walls above grade	21.83	21.53	-	7933.55	4.94
Southeast windows	0.20	0.20	0.23	342.80	0.21
Northeast windows	0.10	0.10	0.23	171.40	0.11
Basement floor header	6.59	6.59	0.80	3193.06	1.99
Below grade foundation	83.11	83.11	-	12254.14	7.63
ZONE 2 Totals:				23894.95	14.87

Ventilation

House Volume	Air Change	Heat Loss MJ	% Annual Heat Loss
374.04 m ³	0.458 ACH	31660.150	19.71

AIR LEAKAGE AND VENTILATION

Building Envelope Surface Area: 313.67 m²

Air Leakage Test Results at 50 Pa.(0.2 in H₂O) = 8.80 ACH

Equivalent Leakage Area @ 10 Pa = 1287.12 cm²

Terrain Description	Height	m
@ Weather Station : Open flat terrain, grass	Anemometer	10.0
@ Building site : Suburban, forest	Bldg. Eaves	6.5

Local Shielding:	Walls:	Heavy
	Flue :	Light

Leakage Fractions- **Ceiling:** 0.200 **Walls:** 0.650 **Floors:** 0.150

Normalized Leakage Area @ 10 Pa: 4.1033 cm²/m²

Estimated Airflow to cause a 5 Pa Pressure Difference: 205 L/s

Estimated Airflow to cause a 10 Pa Pressure Difference: 321 L/s

F326 VENTILATION REQUIREMENTS

Kitchen, Living Room, Dining Room	3 rooms @ 5.0 L/s: 15.0 L/s
Utility Room	1 rooms @ 5.0 L/s: 5.0 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	2 rooms @ 5.0 L/s: 10.0 L/s
Other	2 rooms @ 5.0 L/s: 10.0 L/s
Basement Rooms	: 0.0 L/s

SECONDARY FANS & OTHER EXHAUST APPLIANCES

	Control	Supply (L/s)	Exhaust (L/s)
Dryer	Continuous	-	1.20

Dryer is vented outdoors

AIR LEAKAGE AND VENTILATION SUMMARY

F326 Required continous ventilation: 60.000 L/s (0.58 ACH)

Gross Air Leakage and Ventilation Energy Load: 28517.336 MJ

Seasonal Heat Recovery Ventilator Efficiency: 0.000 %

Estimated Ventilation Electrical Load: Heating Hours: 0.000 MJ

Estimated Ventilation Electrical Load: Non-Heating Hours: 0.000 MJ

Net Air Leakage and Ventilation Load: 31660.150 MJ

SPACE HEATING SYSTEM

Primary Heating Fuel: Natural Gas
Equipment: Induced draft fan furnace/boiler
Manufacturer: Wizard SPH man
Model: Lennox
Calculated* Output Capacity: 23.00 kW
 * Design Heat loss X 1.10 + 0.5 kW
Steady State Efficiency: 80.00 %
Fan Mode: Auto
ECM Motor: No
Low Speed Fan Power: 0 watts
High Speed Fan Power: 446 watts

DOMESTIC WATER HEATING SYSTEM

Primary Water Heating Fuel: Natural gas
Water Heating Equipment: Conventional tank
Energy Factor: 0.554
Manufacturer: Wizard DHW man
Model: Wizard DHW mod

Tank Capacity =	151.40 Litres	Tank Blanket Insulation	0.00 RSI
Tank Location:	Basement	Flue Diameter	76.20 mm
Pilot Energy =	0.00 MJ/day		

ANNUAL DOMESTIC WATER HEATING SUMMARY

Daily Hot Water Consumption:	225.00 Litres
Hot Water Temperature:	55.00 °C
Estimated Domestic Water Heating Load:	15687 MJ
Primary Domestic Water Heating Energy Consumption:	28079.00 MJ
Primary System Seasonal Efficiency:	55.87%

ANNUAL SPACE HEATING SUMMARY

Design Heat Loss at -22.00 °C (54.74 Watts / m3):	20476.49 Watts
Gross Space Heat Loss:	160659.84 MJ
Gross Space Heating Load:	157769.08 MJ
Usable Internal Gains:	27993.27 MJ
Usable Internal Gains Fraction:	17.42 %
Usable Solar Gains:	15308.31 MJ
Usable Solar Gains Fraction:	9.53 %
Auxiliary Energy Required:	114467.52 MJ

Space Heating System Load:	114467.52 MJ
Furnace/Boiler Seasonal efficiency:	80.31 %
Furnace/Boiler Annual Energy Consumption:	140361.41 MJ

BASE LOADS SUMMARY

	kwh/day	Annual kWh
Interior Lighting	3.40	1241.00
Appliances	9.00	3285.00
Other	7.60	2774.00
Exterior Use	4.00	1460.00
HVAC Fans		
HRV/Exhaust	0.00	0.00
Space Heating	1.66	605.11
Space Cooling	0.00	0.00
Total Average Electrical Load	25.66	9365.11

FAN OPERATION SUMMARY (kWh)

Hours	HRV/Exhaust Fans	Space Heating	Space Cooling
Heating	0.0	605.1	0.0
Neither	0.0	0.0	0.0
Cooling	0.0	0.0	0.0
Total	0.0	605.1	0.0

ENERGY CONSUMPTION SUMMARY REPORT

Estimated Annual Space Heating Energy Consumption	= 142539.81 MJ	= 39594.39 kWh
Ventilator Electrical Consumption: Heating Hours	= 0.00 MJ	= 0.00 kWh
Estimated Annual DHW Heating Energy Consumption	= 28079.00 MJ	= 7799.72 kWh
ESTIMATED ANNUAL SPACE + DHW ENERGY CONSUMPTION	= 170618.81 MJ	= 47394.11 kWh
Estimated Greenhouse Gas Emissions	13.554 tonnes/year	

ESTIMATED ANNUAL FUEL CONSUMPTION SUMMARY

Fuel	Space Heating	Space Cooling	DHW Heating	Appliance	Total
Natural Gas (m3)	3767.17	0.00	753.61	0.00	4520.78
Electricity (kWh)	605.11	0.00	0.00	8760.00	9365.11

ESTIMATED ANNUAL FUEL CONSUMPTION COSTS

Fuel Costs Library = Embedded

RATE	Electricity (Egeneric)	Natural Gas (NGgeneri)	Oil (Ogeneric)	Propane (Pgeneric)	Wood (Wgeneric)	Total
\$	1150.16	2274.36	0.00	0.00	0.00	3424.53

Fuel Costs Library Listing

Filename = Embedded

Record # 1	Fuel: Electricity		
Rate ID =	ontario		
Egeneric	average		
Rate Block		Dollars	Charge
	kWhr	Per kWhr	(\$)
Minimum	0.0		10.000
1	99999.0	0.1100	
Record # 2	Fuel: Natural Gas		
Rate ID =	any gas LDC		
NGgeneri			
Rate Block		Dollars	Charge
	m3	Per m3	(\$)
Minimum	0.0		20.000
1	99999.0	0.4500	

Record # 3 Fuel: OilRate ID =
Ogeneric generic

Rate Block		Dollars	Charge
	Litre	Per Litre	(\$)
Minimum	0.0		10.000
1	99999.0	0.8000	

Record # 4 Fuel:
PropaneRate ID =
Pgeneric who has a
better
number?

Rate Block		Dollars	Charge
	Litre	Per Litre	(\$)
Minimum	0.0		0.000
1	99999.0	0.9500	

Record # 5 Fuel: WoodRate ID =
Wgeneric Put your
comments
here

Rate Block		Dollars	Charge
	Cord	Per Cord	(\$)
Minimum	0.0		0.000
1	5.0	300.0000	

MONTHLY ENERGY PROFILE

Month	Energy Load (MJ)	Internal Gains (MJ)	Solar Gains (MJ)	Aux. Energy (MJ)	HRV Eff. %
Jan	28709.2	2878.9	1514.8	24315.5	0.0
Feb	24643.7	2599.8	1815.7	20228.3	0.0
Mar	21690.1	2886.9	2261.4	16541.8	0.0
Apr	13965.0	2805.6	1855.8	9303.6	0.0
May	7377.8	2912.7	1967.6	2497.5	0.0
Jun	1949.4	1561.1	388.3	0.0	0.0
Jul	184.4	184.4	0.0	0.0	0.0
Aug	714.3	701.4	13.0	0.0	0.0
Sep	4972.9	2835.6	1680.0	457.3	0.0
Oct	11512.0	2923.9	1581.6	7006.5	0.0
Nov	17349.1	2812.8	1041.3	13495.1	0.0
Dec	24701.1	2890.3	1188.8	20622.0	0.0
Ann	157769.1	27993.3	15308.3	114467.5	0.0

FOUNDATION ENERGY PROFILE

Month	Heat Loss (MJ)				Total
	Crawl Space	Slab	Basement	Walkout	
Jan	0.0	0.0	2718.1	0.0	2718.1
Feb	0.0	0.0	2260.7	0.0	2260.7
Mar	0.0	0.0	1848.7	0.0	1848.7
Apr	0.0	0.0	1039.7	0.0	1039.7
May	0.0	0.0	279.1	0.0	279.1
Jun	0.0	0.0	0.0	0.0	0.0
Jul	0.0	0.0	0.0	0.0	0.0
Aug	0.0	0.0	0.0	0.0	0.0
Sep	0.0	0.0	51.1	0.0	51.1
Oct	0.0	0.0	783.0	0.0	783.0
Nov	0.0	0.0	1508.1	0.0	1508.1
Dec	0.0	0.0	2304.6	0.0	2304.6
Ann	0.0	0.0	12793.1	0.0	12793.1

FOUNDATION TEMPERATURES & VENTILATION PROFILE

Month	Temperature (Deg °C)			Air Change Rate		Heat Loss (MJ)
	Crawl Space	Basement	Walkout	Natural	Total	
Jan	0.0	19.2	0.0	0.700	0.712	6503.0
Feb	0.0	18.9	0.0	0.671	0.683	5431.0
Mar	0.0	18.8	0.0	0.606	0.618	4457.2
Apr	0.0	19.0	0.0	0.504	0.516	2541.3
May	0.0	19.6	0.0	0.354	0.366	1127.8
Jun	0.0	21.3	0.0	0.259	0.271	398.4
Jul	0.0	23.2	0.0	0.215	0.227	180.7

Aug	0.0	22.8	0.0	0.204	0.216	219.9
Sep	0.0	20.9	0.0	0.287	0.298	676.0
Oct	0.0	20.3	0.0	0.411	0.422	1820.2
Nov	0.0	20.0	0.0	0.532	0.543	3160.9
Dec	0.0	19.5	0.0	0.629	0.640	5143.9
Ann	0.0	20.3	0.0	0.446	0.458	31660.2

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	24315.5	29816.0	0.0	462.7	0.0	30278.7	0.8
Feb	20228.3	24804.2	0.0	385.0	0.0	25189.1	0.8
Mar	16541.8	20283.7	0.0	314.8	0.0	20598.5	0.8
Apr	9303.6	11408.2	0.0	177.1	0.0	11585.3	0.8
May	2497.5	3062.5	0.0	47.5	0.0	3110.0	0.8
Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sep	457.3	560.7	0.0	8.7	0.0	569.4	0.8
Oct	7006.5	8591.5	0.0	133.3	0.0	8724.8	0.8
Nov	13495.1	16547.8	0.0	256.8	0.0	16804.6	0.8
Dec	20622.0	25286.9	0.0	392.5	0.0	25679.4	0.8
Ann	114467.5	140361.4	0.0	2178.4	0.0	142539.8	0.8

MONTHLY ESTIMATED ENERGY CONSUMPTION BY DEVICE (MJ)

Month	Space Heating		DHW Heating		Lights & Appliances	HRV & FANS	Air Conditioner
	Primary	Secondary	Primary	Secondary			
Jan	29816.0	0.0	2557.1	0.0	2678.4	462.7	0.0
Feb	24804.2	0.0	2339.3	0.0	2419.2	385.0	0.0
Mar	20283.7	0.0	2567.1	0.0	2678.4	314.8	0.0
Apr	11408.2	0.0	2410.1	0.0	2592.0	177.1	0.0
May	3062.5	0.0	2381.8	0.0	2678.4	47.5	0.0
Jun	0.0	0.0	2225.8	0.0	2592.0	0.0	0.0
Jul	0.0	0.0	2230.0	0.0	2678.4	0.0	0.0
Aug	0.0	0.0	2204.4	0.0	2678.4	0.0	0.0
Sep	560.7	0.0	2116.2	0.0	2592.0	8.7	0.0
Oct	8591.5	0.0	2270.2	0.0	2678.4	133.3	0.0
Nov	16547.8	0.0	2297.5	0.0	2592.0	256.8	0.0
Dec	25286.9	0.0	2479.4	0.0	2678.4	392.5	0.0
Ann	140361.4	0.0	28079.0	0.0	31536.0	2178.4	0.0

ESTIMATED FUEL COSTS (Dollars)

Month	Electricity	Natural Gas	Oil	Propane	Wood	Total
Jan	105.98	410.99	0.00	0.00	0.00	516.97
Feb	95.68	347.83	0.00	0.00	0.00	443.51
Mar	101.46	295.98	0.00	0.00	0.00	397.44
Apr	94.61	186.89	0.00	0.00	0.00	281.50
May	93.29	85.75	0.00	0.00	0.00	179.05
Jun	89.20	46.88	0.00	0.00	0.00	136.08
Jul	91.84	46.93	0.00	0.00	0.00	138.77
Aug	91.84	46.62	0.00	0.00	0.00	138.46
Sep	89.47	52.33	0.00	0.00	0.00	141.80
Oct	95.91	151.18	0.00	0.00	0.00	247.10
Nov	97.05	247.61	0.00	0.00	0.00	344.65
Dec	103.83	355.35	0.00	0.00	0.00	459.18
Ann	1150.16	2274.36	0.00	0.00	0.00	3424.53

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.