Building Performance Specialist
BUSHNELL ENERGY CONSULTING

FUEL SUMMARY

Date:	February 11, 2011	Rating No.:	0074
Building Name:	Cooper Residence	Rating Org.:	JEB inc
Owner's Name:	Matthew Cooper- Eileen Ryan	Phone No.:	253.274.9161
Property:	6065 61 st Ave. SE	Rater's Name:	John Bushnell
Address:	Lacey , WA 98513	Rater's No.:	WAHERS-006
Builder's Name:	Scott Homes inc		
Weather Site:	Olympia, WA	Rating Type:	Projected Rating
File Name:	Cooper Res..blg	Rating Date:	6-25-10

	WSEC in 2010	Cooper Residence	DIFF	% DIFF
Annual Energy Cost ($/yr)				
Propane	$ 202	$ 148	$ 54	26.8%
Electric	$ 856	$ 491	$ 365	42.7%
Annual End-Use Cost ($/yr)				
Heating	$ 361	$ 79	$ 282	78.2%
Cooling	$ 0	$ 0	$	
Water Heating	$ 132	$ 132	$	
Lights & Appliances	$ 565	$ 428	$ 137	24.2%
Photovoltaics	$ -0	$ -0	$	
Service Charges	$ 48	$ 48	$	
Total	$ 1107	$ 687	$ 419	37.9%
Annual End-Use Consumption				
Heating (Gallons)	80	18	62	77.2%
Heating (kWh)	3892	840	3052	78.4%
Water Heating (Gallons)	162	162		
Lights & Appliances (kWh)	7535	5709	1826	24.2%
Annual Energy Demands (kW)				
Heating	5.3	2.0	3.3	62.5%
Cooling	0.0	0.0		
Water Heating (Winter Peak)	0.0	0.0		
Water Heating (Summer Peak)	0.0	0.0		
Lights & Appliances (Winter Peak)	0.6	0.4	0.2	33.7%
Lights & Appliances (Summer Peak)	1.8	1.4	0.4	21.5%
Total Winter Peak	5.9	2.4	3.5	59.5%
Total Summer Peak	1.8	1.4	0.4	21.5%

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Utility Rates:

Electricity:	Puget sound Energy**********
Propane:	Default Propane Provider

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ENERGY COST AND FEATURE REPORT

Date:	February 11, 2011	Rating No.:	0074
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ANNUAL ENERGY COSTS

	WSEC in 2010	Cooper Residence	DIFF	% DIFF
Heating	$ 361	$ 79	$ 282	78.2%
Cooling	$ 0	$ 0	$	
Water Heating	$ 132	$ 132	$	
Lights & Appliances	$ 565	$ 428	$ 137	24.2%
Photovoltaics	$ -0	$ -0	$	
Service Charges	$ 48	$ 48	$	
Total	$ 1107	$ 687	$ 419	37.9%
Average Monthly	$ 92	$ 57	$ 35	37.9%

ENERGY FEATURES

Ceiling w/Attic:	None	
Vaulted Ceiling:	R-30, Vaulted U=0.035	12" Vaulted SIP***** U=0.023
Above Grade Walls:	2X4 16"O.C. U=0.058	10- 1/4" SIP***** U=0.027
Foundation Walls (Cond):	None	
Found. Walls (Uncond):	Uninsulated	
Doors:	Fire Brk Garage Dr. U=0.144, w/storm	Fibglas wood edge U=0.133
Windows:	Vynl U.-35/S-.23 U=0.350	3-pane casement U=0.150
Frame Floors:	R-30 U=0.035	10 1/4" SIP Floor********** U=0.026
Slab Floors:	None	
Infiltration:	Htg: 10.00 Clg: 10.00 ACH50	Htg: 0.65 Clg: 0.65 ACH50
Infilt. Measure:	Blower door test	
Mechanical Ventilation:	Exhaust Only: 100 cfm, 70.0 watts.	Balanced: HRV, 113 cfm, 40.0 watts.
Interior Mass:	None	

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Mech Equip List:	Water Heating: Instant water heater, Prop, 0.95 EF.	Water Heating: Instant water heater, Prop, 0.95 EF.
	Heating: Air-source heat pump, 22.0 kBtuh, 10.6 HSPF.	Heating: Air-source heat pump, 22.0 kBtuh, 10.6 HSPF.
	Heating: Fuel-fired unit heater, 50.0 kBtuh, 95.0 AFUE.	Heating: Fuel-fired unit heater, 50.0 kBtuh, 95.0 AFUE.
Programmable Thermostat:	Heat=Yes; Cool=Yes	
Ducts:	NA	
Duct Leakage:	NA	
Lights/Appliances:	Defaults	
Active Solar:	None	
Photovoltaics:	None	
Sunspace:	No	

Notes: Where feature level varies in home, the dominant value is shown. Only changed features are shown for Bldg 2.

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EMISSIONS REPORT

Date:	February 11, 2011	Rating No.:	0074
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Address:	Lacey , WA 98513	Rater's No.:	WAHERS-006
Builder's Name:	Scott Homes inc		
Weather Site:	Olympia, WA	Rating Type:	Projected Rating
File Name:	Cooper Res..blg	Rating Date:	6-25-10

Total Emissions

	WSEC in 2010	*Cooper Residence*	*Difference*	*% Difference*
Type of Emissions				
Carbon Dioxide (CO2) - tons/year	3.2	2.1	1.1	35.6%
Sulfur Dioxide (SO2) - lbs/year	1.0	0.6	0.4	42.5%
Nitrogen Oxides (NOx) - lbs/year	8.1	5.2	2.9	35.7%

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Emissions By End-Use

	WSEC in 2010	*Cooper Residence*	*Difference*	*% Difference*
Carbon Dioxide (CO2) - tons/year				
Heating	1.1	0.2	0.8	77.9%
Cooling	0.0	0.0		
Water Heating	0.9	0.9		
Lights & Appliances	1.2	0.9	0.3	24.2%
Photovoltaics	0.0	0.0		
Sulfur Dioxide (SO2) - lbs/year				
Heating	0.4	0.1	0.3	78.4%
Cooling	0.0	0.0		
Water Heating	0.0	0.0		
Lights & Appliances	0.7	0.5	0.2	24.2%
Photovoltaics	0.0	0.0		
Nitrogen Oxide (NOx) - lbs/year				
Heating	2.7	0.6	2.1	77.9%
Cooling	0.0	0.0		
Water Heating	2.2	2.2		
Lights & Appliances	3.2	2.4	0.8	24.2%
Photovoltaics	0.0	0.0		

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Site-to-source energy multipliers and air emission data were taken from the US EPA eGRID2007 database.

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