

# Action Report

**Property**

Kevin and Colleen Kavanaugh  
1033 Vilas Avenue  
Madison, WI 53715

**Organization**

EMF Home Consultants Inc  
608-839-3440  
Mark Fredenberg

**HERS**

Confirmed  
2020-07-28  
Rating No:58-1706  
Rater ID:2879310

Weather:Madison, WI

058-1757 Kavanaugh 1031Vilas.blg

**Builder**

Ultimate Construction

The following table identifies and ranks energy use and cost by building component. A maximum of six components are shown. Current mechanical equipment is assumed for this analysis. To determine the impact of varying the equipment efficiency, change the equipment specified in the building file and perform the energy calculations again.

## ANNUAL ENERGY PROFILE

Energy End-Use	Component	Consumption(MMBtu/yr)	Cost(\$/yr)
HEATING	Above Grade Walls	15.5	103
	Foundation Walls	14.9	99
	Windows/Skylights	12.3	82
	Infiltration	8.5	57
	Ceilings/Roofs	4.6	31
	Slab Floors	3.6	24
	Other	-10.5	-70
	Total	49.0	327
COOLING	Internal Gains	4.4	177
	Windows/Skylights	2.4	96
	Ceilings/Roofs	0.0	2
	Other	-3.3	-134
	Total	3.5	141
WATER HEATING	Water Heater	16.4	100
LIGHTS & APPLIANCES	Lights & Appliances	27.3	997

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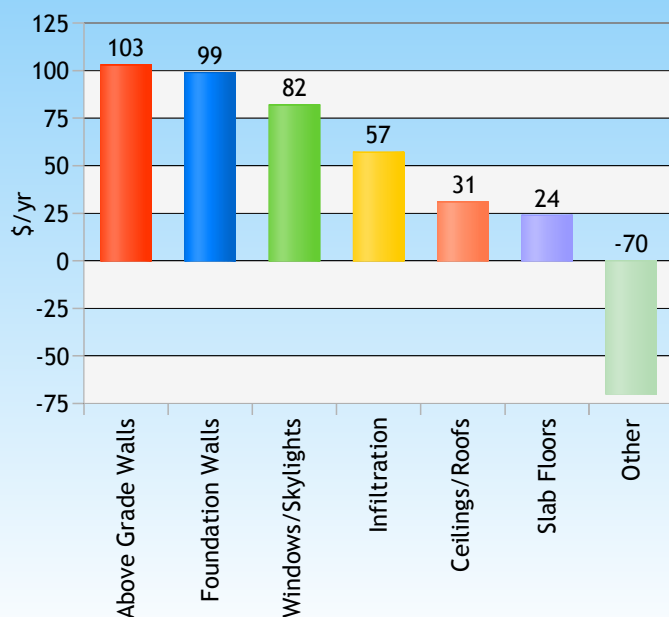
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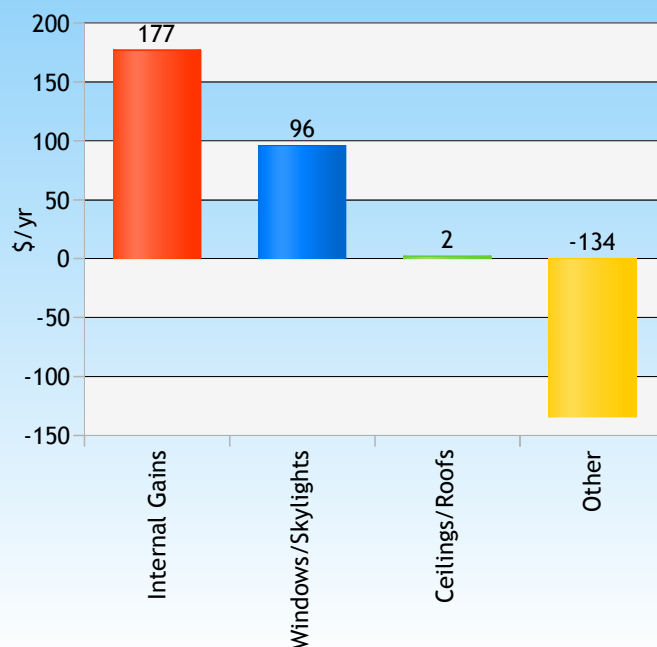
## Builder

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### Heating Cost (\$/yr)



### Cooling Cost (\$/yr)



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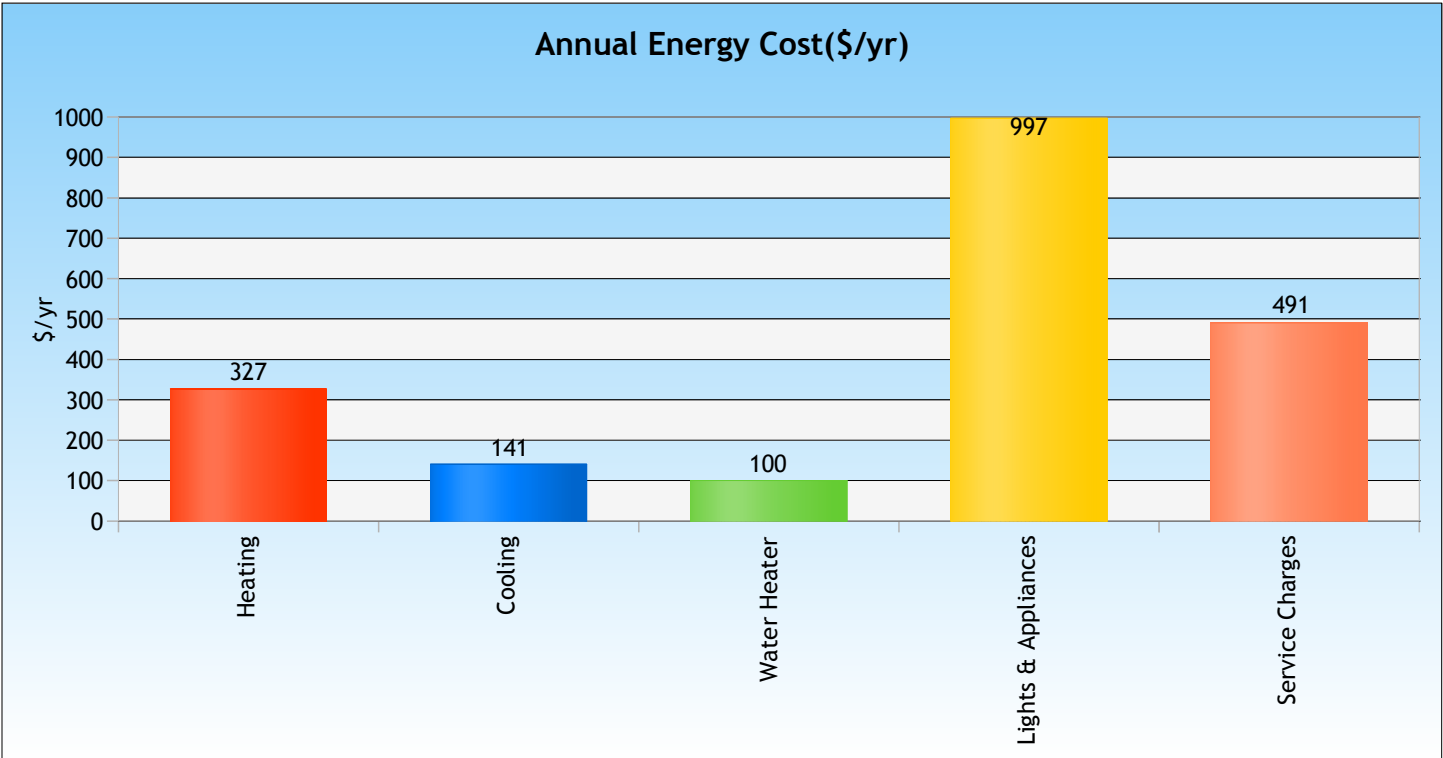
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# Energy Cost and Features

## Property

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## Builder

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## Annual Energy Costs

\$/yr

Heating	327
Cooling	141
Water Heating	100
Lights & Appliances	997
Photovoltaics	-0
Service Charges	491
Total	2055
Average Monthly(\$/Month)	171

## Energy Features

Ceiling w/Attic	R60 Attic24"oc U=0.016
Sealed Attic	None
Vaulted Ceiling	None
Above Grade Wall	SIP R26 U=0.034
Foundation Walls (Cond)	8-12"C R13 R0 R=13.0
Foundation Walls (Uncond)	None
Doors	St 1.75" R7.5 U=0.119
Windows	NFRC .30 / .31 U=0.300
Floors	R60 D.P. U=0.018
Slab Floors	Uninsulated U=0.365
Infiltration	Htg: 609 Clg: 609 CFM50
Infiltration Measure	Blower door
Mechanical Ventilation	Balanced: ERV, 102 cfm, 102.0 watts.
Interior Mass	None
Mechanical Equipment 1	Heating: Fuel-fired air distribution, 82.0 kBtuh, 96.0 AFUE.
Mechanical Equipment 2	Cooling: Air conditioner, 42.0 kBtuh, 13.0 SEER.
Mechanical Equipment 3	Water Heating: Conventional, Gas, 0.59 EF.
Programmable Thermostat	Heat=Yes; Cool=Yes
Ducts	UninsulatedConditioned basement
Duct Leakage to Outside	20.00 CFM @ 25 Pascals
Total Duct Leakage	0.00 CFM @ 25 Pascals
Lights/Appliances	Rating Tab

Note: Where feature level varies in home, the dominate value is shown.

**REM/Rate - Residential Energy Analysis and Rating Software v16.0.4 Wisconsin**

This information does not constitute any warranty of energy costs or savings.

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# Energy Cost and Features

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## Energy Features

Active Solar	None	
Photovoltaics	0.00	
Sunspace	No	

Note: Where feature level varies in home, the dominate value is shown.

# Focus on Energy New Home Certification Report

File Number: 58-1706

Year Built: 2020

Certification Date: 2020-07-28

Builder File Number:

Property Address	Builder	Building Performance Consultant
1033 Vilas Avenue	Ultimate Construction	EMF Home Consultants Inc
Madison, WI 53715	4827 Pierceville Road	Mark Fredenberg
	Cottage Grove, WI 53527	mfred999@gmail.com

General Building Information	
Area of conditioned space (sq ft)	4199
Finished floor area (sq ft)	2926
Volume (cu ft)	40438
Shell area (sq ft)	7997
Housing type	Single-family detached
Floors above grade	2
Number of bedrooms	4
Foundation type	Conditioned basement

Energy Efficiency Data				
	House	PV	Geo	Total
Est. summer peak reduction (kW)	0.42	0.0	0.0	0.4
Annual energy savings (kWh)	934	0	0	934
Annual energy savings (Therms)	484	0	0	484

Performance Data	
Percent more efficient than current code	45.70%
Estimated average monthly energy bill	\$182
Total MMBtu/yr consumption	102
Whole House Ventilation	
Type	Balanced
Required ventilation rate (CFM)	67
TESTED ventilation rate (CFM)	102
Air Tightness	
Infiltration - Maximum (CFM50)	1599
Infiltration - TESTED (CFM50)	609
ACH 50:	0.90
CFM50/sq ft shell:	0.08
Effective Leakage Area (ELA) (sq in):	33

Mechanical Systems					
	Type	Fuel Type	Efficiency	EAE Value	Capacity
Primary SPACE HEATING	Fuel-fired air distribution	Natural gas	96.0 AFUE	572	82.0 KBtuh
Secondary SPACE HEATING	N/A	N/A	N/A	N/A	N/A
Primary SPACE COOLING	Air conditioner	Electric	13.0 SEER	N/A	42.0 KBtuh
Secondary SPACE COOLING	N/A	N/A	N/A	N/A	N/A
	Type	Fuel Type	Efficiency	Recovery Eff	Gallons
Primary WATER HEATING	Conventional	Natural gas	0.59 EF	0.8	75
Secondary WATER HEATING	N/A	N/A	N/A	N/A	N/A



FOCUS ON ENERGY NEW HOME CERTIFICATION PROGRAM

# Certified Energy-Efficient Home

1033 Vilas Avenue  
Madison, WI 53715

CERTIFIED ON 2020-07-28

Your New Home is Certified by Focus on Energy as  
**45.70% MORE ENERGY EFFICIENT**  
than what is currently required by Wisconsin state building code.

**Builder File No:**

**Certification No: 58-1706**

REM/Rate - Residential Energy Analysis and Rating  
Software v16.0.4 Wisconsin. This information does not  
constitute any warranty of energy costs or savings.  
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# RESNET Home Energy Rating Standard Disclosure

For home located at: 1033 Vilas Avenue

City: Madison

State: WI

1. ☒ The Rater or Rater's employer is receiving a fee for providing the rating on this home.
2. ☒ In addition to the rating, the Rater or Rater's employer has also provided the following consulting services for this home.

- ☐ A. Mechanical system design
- ☐ B. Moisture control or indoor air quality consulting
- ☒ C. Performance testing and/or commissioning other than required for the rating itself
- ☐ D. Training for sales or construction personnel
- ☐ E. Other (specify below)

3. ☐ The Rater or Rater's employer is:

- ☐ A. The seller of this home or their agent
- ☐ B. The mortgage for some portion of the financial payments on this home
- ☐ C. An employee, contractor or consultant of the electric and/or natural gas utility serving this home

4. ☐ The Rater or Rater's employer is a supplier or installer of products, which may include:

HVAC Systems

Thermal Insulation Systems

Air sealing of envelope or duct systems

Windows or window shading systems

Energy efficient appliances

Construction (builder, developer, construction contractor, etc.)

Other (specify below):

Installed in this home by:		OR	is in the business of:	
<input type="checkbox"/> Rater	<input type="checkbox"/> Employer		<input type="checkbox"/> Rater	<input type="checkbox"/> Employer
<input type="checkbox"/> Rater	<input type="checkbox"/> Employer		<input type="checkbox"/> Rater	<input type="checkbox"/> Employer
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<input type="checkbox"/> Rater	<input type="checkbox"/> Employer		<input type="checkbox"/> Rater	<input type="checkbox"/> Employer

5. ☐ This home has been verified under the provisions of Chapter 6, Section 603 'Technical Requirements for Sampling' of the Mortgage Industry National Home Energy Rating Standard as set forth by the Residential Energy Services Network (RESNET).

I attest that the above information is true and correct to the best of my knowledge. As a Rater or Rating Provider I abide by the rating quality control provisions of the Mortgage Industry National Home Energy Rating Standard as set forth by the Residential Energy Services Network (RESNET). The national rating quality control provisions of the rating standard are contained in Chapter One 4.C.8. of the standard and are posted at [http://resnet.us/standards/RESNET\\_Mortgage\\_Industry\\_National\\_HERS\\_Standards.pdf](http://resnet.us/standards/RESNET_Mortgage_Industry_National_HERS_Standards.pdf). The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

Mark Fredenberg  
Rater's Printed Name

2879310  
Certification #

Rater's Signature

August 27, 2020  
Date

RESNET Form 0300-2