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**ACTION REPORT**

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Date: January 20, 2009

Rating No.:

Building Name: [REDACTED]

Rating Org.: Virgil Farlow

Owner's Name: Kevin McMahon

Phone No.: 315-364-5408

Property: [REDACTED]

Rater's Name: Virgil Farlow

Address: Cortland, NY 13045

Rater's No.: R0145

Builder's Name: KJM Contracting Inc

Weather Site: Syracuse, NY

Rating Type: Verified Condition

File Name: McMahon [REDACTED].blg

Rating Date: 06-13-2008

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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	5.2	\$	210
	Slab Floors	4.8	\$	193
	Mechanical Ventilation	2.9	\$	118
	Ceilings/Roofs	2.7	\$	108
	Windows/Skylights	2.5	\$	100
	Infiltration	0.7	\$	28
	Other	-3.7	\$	148
	Total	15.2	\$	609
COOLING	Internal Gains	2.1	\$	86
	Windows/Skylights	1.2	\$	51
	Ceilings/Roofs	0.1	\$	3
	Other	-1.9	\$	-77
	Total	1.5	\$	63
WATER HEATING	Water Heater	10.4	\$	425
LIGHTS & APPLIANCES	Lights & Appliances	24.6	\$	999

2005 EPACT ENERGY EFFICIENT HOME TAX CREDIT

Date: October 23, 2008 Rating No.:  
 Building Name: McMahan Rating Org.: Virgil Farlow  
 Owner's Name: Kevin McMahan Phone No.: 315-364-5408  
 Property: Address: Cortland, NY 13045 Rater's Name: Virgil Farlow  
 Builder's Name: KJM Contracting Inc Rater's No.: R0145  
 Weather Site: Syracuse, NY Rating Type: Verified Condition  
 File Name: McMahan.big Rating Date: 06-13-2008

Normalized, Modified End-Use Loads (MMBtu/year)

	2004 IECC	
	50% Target	As Designed
Heating:	36.4	19.3
Cooling:	6.6	4.4
Total:	43.1	23.7

Envelope Loads (MMBtu/year)

	2004 IECC	
	90% Target	As Designed
Heating:	65.6	41.4
Cooling:	11.9	8.0
Total:	77.5	49.4

**This home MEETS the requirements for the residential energy efficiency tax credits under Section 1332, Credit for Construction of New Energy Efficient Homes, of the Energy Policy Act of 2005.**

As demonstrated above, this dwelling unit has a projected level of annual heating and cooling energy consumption that is at least 50% below the annual level of heating cooling energy consumption of a reference dwelling in the same climate zone, and the building envelope components improvements alone account for at least 10% of those savings. The projected heating and cooling energy savings above have been calculated in the manner prescribed in Section 2.02 of Notice 2006-27 of the Internal Revenue Service. Field inspections of the dwelling unit performed by the undersigned eligible certifier during and after the completion of construction have confirmed that all features of the home affecting such heating and cooling energy consumption comply with the design specifications provided to the undersigned certifier.

**Building Features**

Ceiling Flat: NA Slab: R-0.0 Edge, R-10.0 Under  
 Vaulted Ceiling: R-39 Duct: NA  
 Above Grade Walls: R-25, R-20 Window: U-Value = 0.330, SHGC = 0.450  
 Foundation Walls: R-20.0 Ground-Source HP: Electric, Htg: 3.0 COP, Clg: 15.0 EER.  
 Exposed Floor: NA

**Under penalties of perjury, I declare that I have examined this certification, including accompanying documents, and to the best of my knowledge and belief, the facts presented in support of this certification are true, correct, and complete.**

Name: Virgil Farlow Signature: \_\_\_\_\_  
 Company: Virgil Farlow Date: October 23, 2008  
 Address: \_\_\_\_\_



**ENERGY STAR HOME REPORT**

Date:	January 20, 2009	Rating No.:	
Building Name:	[REDACTED]	Rating Org.:	Virgil Farlow
Owner's Name:	Kevin McMahon	Phone No.:	315-364-5408
Property:	[REDACTED]	Rater's Name:	Virgil Farlow
Address:	Corland, NY 13045	Rater's No.:	R0145
Builder's Name:	KJM Contracting Inc	Rating Type:	Verified Condition
Weather Site:	Syracuse, NY	Rating Date:	06-13-2008
File Name:	McMahon [REDACTED].blg		

**Normalized, Modified End-Use Loads (MMBtu/year)**

	ENERGY STAR	As Designed
Heating:	58.3	18.7
Cooling:	10.6	4.8
Water heating:	8.3	9.6
Lighting & Appliances:	23.3	27.4
Total:	100.5	60.5
<b>HERS Index:</b>	<b>80</b>	<b>46</b>
<b>NY HERS Score:</b>	<b>84.0</b>	<b>90.8</b>

**ENERGY STAR Mandatory Requirements**

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Thermal Bypass Inspection Checklist * | <input checked="" type="checkbox"/> ENERGY STAR Products *         |
| <input checked="" type="checkbox"/> Ductwork Requirements                 | <input checked="" type="checkbox"/> ENERGY STAR Scoring Exceptions |

\* Thermal Bypass Checklist and ENERGY STAR Products are not checked in REMRate at this time.

**This home MEETS OR EXCEEDS the energy efficiency requirements for designation as an EPA ENERGY STAR Qualified Home.**

Pollution Prevented		Energy Cost Savings (\$/year)	
Type of Emissions	Reduction (lb/year)		
Carbon Dioxide (CO2)	12810.8	Heating:	\$1666
Sulfur Dioxide (SO2)	49.1	Cooling:	\$118
Nitrogen Oxides (NOx)	15.0	Water Heating:	\$26
		Lights & Appliances:	\$52
		Total:	\$1862

The energy savings and pollution prevented are calculated by comparing the Rated Home to the Reference Home as defined in the "Mortgage Industry National Home Energy Rating Systems Standards" as promulgated by the Residential Energy Services Network (RESNET). In accordance with these guidelines, building inputs affecting setpoints, infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads.

**REM/Rate - Residential Energy Analysis and Rating Software v12.6 New York**

This information does not constitute any warranty of energy cost or savings.  
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EMISSIONS REPORT

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Date: January 20, 2009

Rating No.:

Building Name: McMahon [REDACTED]

Rating Org.: Virgil Farlow

Owner's Name: Kevin McMahon

Phone No.: 315-364-5408

Property: [REDACTED]

Rater's Name: Virgil Farlow

Address: Cortland, NY 13045

Rater's No.: R0145

Builder's Name: KJM Contracting Inc

Weather Site: Syracuse, NY

Rating Type: Verified Condition

File Name: McMahon [REDACTED].blg

Rating Date: 06-13-2008

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**Total Emissions (lbs/year)**

*McMahon1047Rt90*

**Type of Emissions**

Carbon Dioxide (CO2)	13741.7
Sulfur Dioxide (SO2)	52.7
Nitrogen Oxides (NOx)	16.1

**Emissions By End-Use (lbs/year)**

*McMahon1047Rt90*

**Carbon Dioxide (CO2)**

Heating	4031.1
Cooling	410.0
Water Heating	2773.7
Lights & Appliances	6527.0
Photovoltaics	0.0

**Sulfur Dioxide (SO2)**

Heating	15.5
Cooling	1.6
Water Heating	10.6
Lights & Appliances	25.0
Photovoltaics	0.0

**Nitrogen Oxide (NOx)**

Heating	4.7
Cooling	0.5
Water Heating	3.2
Lights & Appliances	7.6
Photovoltaics	0.0

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**ENERGY COST AND FEATURE REPORT**

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Date:	January 20, 2009	Rating No.:	
Building Name:	McMahon [REDACTED]	Rating Org.:	Virgil Farlow
Owner's Name:	Kevin McMahon	Phone No.:	315-364-5408
Property:	[REDACTED]	Rater's Name:	Virgil Farlow
Address:	Cortland, NY 13045	Rater's No.:	R0145
Builder's Name:	KJM Contracting Inc	Rating Type:	Verified Condition
Weather Site:	Syracuse, NY	Rating Date:	06-13-2008
File Name:	McMahon [REDACTED].blg		

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**McMahon1047Rt90****ANNUAL ENERGY COSTS**

Heating	\$	609
Cooling	\$	63
Water Heating	\$	425
Lights & Appliances	\$	999
Photovoltaics	\$	-0
Service Charges	\$	157
Total	\$	2253
Average Monthly	\$	188

**ENERGY FEATURES**

Ceiling w/Attic:	None
Vaulted Ceiling:	R38,ISO,6-16,C U=0.036
Above Grade Walls:	R25,ISO1,4-48,P U=0.056
Foundation Walls (Cond):	R10I,10E R=20.0
Found. Walls (Uncond):	None
Doors:	R7 steel insul U=0.126
Windows:	DbI/LoE/Arg - Vinyl U=0.330
Frame Floors:	None
Slab Floors:	R10U.24W U=0.079
Infiltration:	Htg: 527 Clg: 527 CFM50
Infil. Measure:	Blower door test
Mechanical Ventilation:	Exhaust Only: 110 cfm, 35.0 watts.
Interior Mass:	None
Mech Equip List:	GSHP: Htg: 113.3 kBtu/h, 3.0 COP. Clg: 60.0 kBtu/h, 15.0 EER.  Water Heating: Instant water heater, Elec, 0.99 EF.
Programmable Thermostat:	Heat=Yes; Cool=Yes
Ducts:	NA
Duct Leakage:	NA

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ENERGY COST AND FEATURE REPORT

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McMahon [REDACTED]

Page 2

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Lights/Appliances:	Defaults
Active Solar:	None
Photovoltaics:	None
Sunspace:	No

Notes: Where feature level varies in home, the dominant value is shown.

## AIR LEAKAGE REPORT

Date:	January 20, 2009	Rating No.:	
Building Name:	McMahon	Rating Org.:	Virgil Farlow
Owner's Name:	Kevin McMahon	Phone No.:	315-364-5408
Property:		Rater's Name:	Virgil Farlow
Address:	Cortland, NY 13045	Rater's No.:	R0145
Builder's Name:	KJM Contracting Inc	Rating Type:	Verified Condition
Weather Site:	Syracuse, NY	Rating Date:	06-13-2008
File Name:	McMahon .blg		

Whole House Infiltration	Blower door test	
	Heating	Cooling
Natural ACH:	0.08	0.06
ACH @ 50 Pascals:	1.30	1.30
CFM @ 25 Pascals:	336	336
CFM @ 50 Pascals:	527	527
Eff. Leakage Area:	28.9	28.9
Specific Leakage Area:	0.00008	0.00008
ELA/100 sf shell:	0.55	0.55
Total Duct Leakage to Outside	CFM @ 25 Pascals:	N/A
	CFM25 / CFMfan:	N/A
	CFM25 / CFA:	N/A
	CFM per Std 152:	N/A
	CFM per Std 152 / CFA:	N/A
	CFM @ 50 Pascals:	N/A
	Eff. Leakage Area:	N/A
	Thermal Efficiency:	0.00
Ventilation	Mechanical:	Exhaust Only
	Sensible Recovery Eff. (%):	0.0
	Total Recovery Eff. (%):	0.0
	Rate (cfm):	110
	Hours/Day:	10.0
	Fan Watts:	35.0
	Cooling Ventilation:	Natural Ventilation

### ASHRAE 62.2 - 2003 Ventilation Requirements

For this home to comply with ASHRAE Standard 62.2 - 2003 Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings, a minimum of 46 cfm of mechanical ventilation must be provided continuously, 24 hours per day. Alternatively, an intermittently operating mechanical ventilation system may be used if the ventilation rate is adjusted accordingly. For example, a 92 cfm mechanical ventilation system would need to operate 12 hours per day, as long as the system operates to provide required average ventilation once each hour.

# Home Energy Rating Certificate

Cortland, NY 13045



**5 Stars Plus  
Verified Condition**

## Uniform Energy Rating System

## Energy Efficient

1 Star	1 Star Plus	2 Stars	2 Stars Plus	3 Stars	3 Stars Plus	4 Stars	4 Stars Plus	5 Stars	5 Stars Plus
0-19	20-39	40-49	50-59	60-69	70-79	80-81	81-82	83-85	86-100

**NY HERS Score: 90.8 / HERS Index: 46**

### General Information

Conditioned Area: 2364 sq. ft. House Type: Single-family detached  
 Conditioned Volume: 24272 cubic ft. Foundation: Slab  
 Bedrooms: 2

### Mechanical Systems Features

Ground-source heat pump: Electric, Htg: 3.0 COP, Clg: 15.0 EER.  
 Water Heating: Instant water heater, Electric, 0.99 EF, 0.0 Gal.

Duct Leakage to Outside: NA  
 Ventilation System: Exhaust Only: 110 cfm, 35.0 watts.  
 Programmable Thermostat: Heating: Yes Cooling: Yes

### Building Shell Features

Ceiling Flat: NA Exposed Floor: NA  
 Vaulted Ceiling: R-39 Window Type: Db/LoE/Arg - Vinyl  
 Above Grade Walls: R-25, R-20 Infiltration:  
 Foundation Walls: R-20.0 Rate: Htg: 527 Clg: 527 CFM50  
 Slab: R-0.0 Edge, R-10.0 Under Method: Blower door test

### Lights and Appliance Features

Percent Fluorescent Pin-Based: 20.00 Clothes Dryer Fuel: Electric  
 Percent Fluorescent CFL: 75.00 Range/Oven Fuel: Electric  
 Refrigerator (kWh/yr): 775.00 Ceiling Fan (cfm/Watt): 0.00  
 Dishwasher Energy Factor: 0.46

The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

**REM/Rate - Residential Energy Analysis and Rating Software v12.6 New York**

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

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### Rating Number:

Certified Energy Rater: Virgil Farlow

Rating Date: 06-13-2008

Rating Ordered For: Kevin McMahon

### Estimated Annual Energy Cost

Use	Verified Condition		
	MMBtu	Cost	Percent
Heating	15.2	\$609	27%
Cooling	1.5	\$63	3%
Hot Water	10.4	\$425	19%
Lights/Appliances	24.6	\$999	44%
Photovoltaics	-0.0	\$-0	-0%
Service Charges		\$157	7%
<b>Total</b>		<b>\$2254</b>	<b>100%</b>

**This home meets or exceeds the minimum criteria for all of the following:**

**Virgil Farlow**

659 Sherwood Rd

Aurora, NY 13026

315-364-8953

Certified Energy Rater