Commercial / Residential Airflow Assessment

Customer: Ryan Adams c/o Built by Ryan

Project Address: 7 Sunshine Ln, Wells ME
Test Date: December 16th, 2019
Auditor: Erik North, BPI Certified Building Analyst

Ryan,

Thank you again for choosing Free Energy Maine and please feel free to contact me with any questions.

Sincerely,

Erik
Erik North, BPI Certified Building Analyst (BPI # 5017605)
President
Free Energy Maine, LLC

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Technical Summary

This assessment was made using the prescriptive standards defined by the Building Performance Institute (BPI), the 2009 International Energy Conservation Code (as used by the Maine Uniform Building and Energy Code) and ASHRAE 62.2 (American Society of Heating, Refrigerating and Air-Conditioning Engineers). The testing includes a blower door test, thermal imaging, full collection of insulation and housing dimension data and combustion safety testing.

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In order to properly assess the building envelope, and determine the net effect of the construction, insulation and air sealing efforts at 7 Sunshine Ln, Wells ME the following was done:

1. Using a Minneapolis Blower Door (Model 3) with a DG-700 pressure/flow manometer, the building was placed in a winter time state (all exterior doors and windows shut, interior doors ajar) and then depressurized to approx negative (-) 50 Pascals to evaluate building envelope air tightness.
2. Once the CFM50 flow reading had stabilized, the value was recorded (in CFM exhausted).
3. All walls were scanned with a FLIR E50 thermal camera to locate areas of thermal breakage, non-uniform wall insulation, and excess air infiltration.

Test Results:

Blower door reading:	580 CFM50 (Cubic Feet/Minute at - 50 Pascals)
Conversions:	0.14 ACHn (Air Changes/Hour at natural pressure)
	1.73 ACH50 (Air Changes/Hour at - 50 Pascals)
Conditioned living space:	approx 2,680 sq ft, including conditioned basement space.

Impressions – Continued on next page:

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Impressions:

The building at 7 Sunshine Ln, Wells was found to be substantially tighter than one would expect for buildings of a similar size and construction. The insulation and air sealing efforts in this new construction were comprehensive and substantial.

Very little excess air flow was noted during final thermal inspection, no major thermal breaks were noted, and all exterior walls showed good insulation uniformity.

MUBEC (Maine building code) currently uses the IECC 2009 energy standards for residential construction. The IECC 2009 standard calls for the building envelope to be less than 7.0 ACH50. 7 Sunshine Ln, Wells, in it's current state, recorded a 1.73 ACH50, far exceeding the IECC 2009 standard for building tightness.

Thank you again for the opportunity to help and please feel free to contact me if you have any questions.

Erik North, B.S., B.A.

B.P.I. Certified Building Analyst

B.P.I Certification # 5017605