

October 1, 2013

Michigan House of Representatives  
Committee on Energy and Technology  
House Office Building, Room 519  
Lansing, MI

Dear Committee Members,

Thank you for the opportunity to submit written testimony about the importance of the Energy Optimization Standard, which is a part of P.A. 295 of 2008. I have a Bachelors of Science Degree in Sustainable Business, I am Leadership in Energy and Environmental Design (LEED) certified, and I serve as a Living Building Ambassador and am the Executive Director for the Alliance for Environmental Sustainability in Grand Rapids. I have recently conducted energy efficiency improvements to my home and would like to share the results.

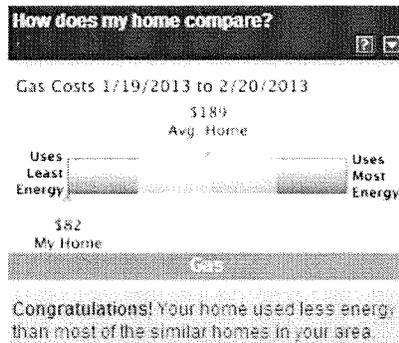
The data below is from an entire year, with temperature fluctuations from winter to summer taken into account. It takes a full season to tell the whole story. Below are actual energy bills, calculations, considerations, energy habits and other values beyond return on investment and dollars saved.

**TOTAL COST AND ENERGY SAVINGS, March 2012 – February 2013:**  
***\$1,000*** Saved on total energy costs (gas and electric) compared to previous owners  
**53%** in total energy (gas and electric) savings compared to previous owners

**\$900** Spent on Energy (Gas & Electric) 3/12 - 2/13  
**15,323** KHW of Energy (Gas & Electric) Use 3/12 - 2/13

**69%** Reduction in Electricity Usage & \$630 saved Compared to Previous Owners\*  
**36%** Reduction in Gas Usage & \$350 saved Compared to Previous Owners\*

\* Numbers compared by Heating Degree Days (HDD) & Cooling Degree Days (CDD) from both years. The Post remodel summer of 2012 was 11% warmer and the winter was 15% warmer.



This is an exact comparison from DTE Energy, my house come in at the bottom of the chart has been the case for every single month since we have been here. We have more than a 100% reduction in cost compared to a conventional home similar to mine.

### Investments Toward Efficiency

**\$21,000** spent on insulation and heating and cooling improvements to achieve energy reduction. This was financed directly into the mortgage of the house through a 0% interest 5 year loan, making this affordable up front.

### 20 year return on investment (ROI)

Due to investments in energy optimization, we expect to **save \$47,000 throughout the life of our 30 year mortgage** – even with a 3% inflation increase of gas and electricity costs taken into account. If we were to stay in the house for only 10 years, we could **save \$11,000** compared to if we did nothing to become more energy efficient. Due to inflation, we are on schedule for a 16 year payback period, but we expect the house to be appraised higher since it is now “green.”

### Benefits Beyond Dollars & CO2 Savings

Energy efficiency upgrades also improved the indoor air quality of the home without any additional equipment or financing.

Changing the heating system improved the indoor air quality because it has a higher Minimum Efficiency Reporting Value rated filter (10). The higher the rating, the more dust, particulates, VOCs, bacteria and other airborne unpleasantness are caught in the filter. The filter is constantly running at a low speed, circulating the air. The new heater also has a power vented sealed exhaust to prevent carbon monoxide emissions.

Sealing the house led to less air exchanges through the wall cavities reducing potential exposure to poor indoor air quality. The air is now exchanged through an Ultimate Air Energy Recovery Ventilator (ERV) which acts like lungs in the house, bringing in fresh air and expelling stale old air. The ERV captures wasted heat in the winter and conditions the air in the summer to prevent losing energy. Energy efficiency is about improved health, comfort and savings for homeowners

and the above data shows that this is exactly what occurs when investing in energy efficiency products.

Efficiency is the first energy resource the State should turn to in a statewide energy plan for Michigan. The cleanest energy is the energy we do not use. The Michigan Public Service Commission estimates a cumulative customer benefit of more than \$2.5 billion from 2011 through 2015 due to investments in energy efficiency. The MPSC also reported that for every \$1 used for energy optimization, consumers see a return of \$3.55 in avoided energy costs. I encourage you to support a stronger Michigan economy through energy optimization policy.

Sincerely,

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