GREEN HOME
The Engelmoehr Residence
LEED Platinum
Maren Engelmoehr, AIA

From July 2007 to February 2015
The Engelmoehr Residence
505 Creekside Place
Kirkwood, Missouri

July 2007

February 2015
The Engelmohr Residence

Second Floor – 1340 s.f.

First Floor – 1330 s.f.

We love the big open kitchen-family room but it is a little loud at times.

Most people come to the side entrance instead of the front. It would have been better to have the mud room closer to the side entrance.

Bathroom/laundry plan works great!
Being walking distance from downtown gives our teenagers a lot of independence.
In 2012, we replaced the tankless water heater to a conventional water heater.
Water Efficiency

No problems whatsoever with any of our low flow fixtures!

Low-Flow Faucets
1.5 gpm

Low-Flow Toilets
2.28 gpf

Low-Flow Shower
2.0 gpm
Our wood floors have held up well. They are faded in some areas near windows that get a lot of sun but they still look good.
Materials and Resources

- Repainted all walls in 2014.

**ScrubTough / The Architect's Choice**
A premium eggshell paint that attracts attention but repels scuffs and stains. ScrubTough's polyurethane formula withstands regular cleaning and keeps walls looking their best.

**Low VOC paint & carpet**
- July 2007
- February 2015
Indoor Environmental Quality

We love the south facing glass and natural ventilation.

South Facing Glass
Energy Star windows

Plenty of daylight
No problems with existing systems.
Replaced Kitchenaid refrigerator with Samsung energy star.

Replaced Whirlpool Washer with Kenmore energy star.

Major repairs to Kitchenaid microwave, dishwasher, & trash compactor.

Energy Star Kitchenaid Appliances
Refrigerator, Range, Dishwasher, Trash Compactor

July 2007

February 2015
Energy and Atmosphere

Excellent performance.

Structural Insulated Panels
Walls R=30, Roof R=45
## Results

**Average Monthly utility costs, 4 bedrooms, 2600 s.f:**

<table>
<thead>
<tr>
<th>House Type</th>
<th>Typical Non-Green House</th>
<th>Green House As designed</th>
<th>Green House Actual</th>
<th>Existing House (100+ yrs old)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gas $/MO rate: $0.86/therm</td>
<td>$90.73 105.5 Therms</td>
<td>$54.46 63.33 Therm</td>
<td>$130.04 154.7 Therms</td>
</tr>
<tr>
<td></td>
<td>Electric Rate: $0.065/kwh</td>
<td>$68.40 1052.36 kWh</td>
<td>$41.04 631.42 kWh</td>
<td>$144.92 2229.50 kWh</td>
</tr>
<tr>
<td>Total Monthly Utility Cost</td>
<td>$159.13</td>
<td>$95.50</td>
<td>$111.75</td>
<td>$274.96</td>
</tr>
</tbody>
</table>

### Comparison
- **Baseline**: 41% better
- **Actual**: 32% better
- **Existing House**: 72% worse

* note: prices do not include city taxes and service fees

Heating=68 degrees  
Cooling=78 degrees

February 2015
2008-2009
The Waste Diet Project

From KETC, Living St. Louis Producer Anne-Marie Berger meets a local family that is on a diet—but they’re not cutting back on food, instead, the Engelmohrs are reducing their waste. This Kirkwood family has started watching what they buy and how much trash they throw away each week. To learn more about the "Waste Diet," visit www.thewastediet.com.

For 1 year, our family of 4 recorded our trash and recyclables.
In that year, we diverted 1 ton of waste from the landfill, recycled 700 lbs, and eliminated 500+ plastic bags, 800+ glass bottles, and 1600+ paper napkins from waste stream.
2013
Chicken Coop Project

Our sustainable coop is made from re-used pallettes, a reused door, plywood walls, and a metal roof. Part of the roof is a green garden.

Coop = $1,000, 5 yrs of food = $1,040, 5 years of litter = $375
Total cost for 5 years = $2,415. Equates to about $0.33/egg.
2013
Chicken Project
May 2013

Batman and Al Capone are Plymouth Rock Hens, Gloria is a Red Star Hen, and Lorraine is Buff Orpington Hen. They each lay one egg per day.
thank you!