



Go Green Northbrook is a non-affiliated, grassroots organization composed of individuals interested in evolving Northbrook, IL, into a benchmark green community. Our mission is to promote environmentally sustainable decisions in our community. We are a group for anyone willing to make any effort — small or large — towards encouraging and leading an environmentally thoughtful life.

Gerleman Residence Evaluation: Home Energy Conservation with Elevate Energy

Last month I invited Elevate Energy, a nonprofit energy conservation company, to schedule one of their approved private contractors to assess the energy efficiency of our home. Contractors are first certified by the Building Performance Institute, and are then evaluated and held accountable by Elevate Energy. They test primarily for air sealing and insulation.

The contractor arrived at approximately 5:00pm to begin the assessment with an air test. A fan was placed in our front door frame, which blew air out of our house. This creates a vacuum inside that allowed us to walk the house finding air leaks. We found the most significant air seepage at the bottom of our basement stairs, near a trap door to the attic, and at a 2" hole cut into an interior wall for a telephone wire. Other leaks discovered were around bathroom exhaust fans, near a light switch next to the front door, from the laundry room and around outside door frames. There was also leakage around our office skylight.

The contractor explained that the major air leaks were caused by improper home construction. Homes are supposed to be built with internal and external walls sealed at the attic floor to prevent air from inside the house from escaping into the attic. Walls can act like chimneys otherwise. The walls were not sealed in my house. Heated or cooled air from inside entered these walls through holes and escaped into the attic.

In some homes, significant leaks are through basement rim joists, though that was not significant in our house. The contractor also checked insulation and safety of gas appliances as part of their assessment.

The contractor sent a proposal to seal the air leaks and add insulation in the attic. They also identified applicable utility rebates. Since we conducted our assessment through Elevate Energy, they also ensured that the cost proposal is fair, hold the consultant accountable for doing a good job, and resolve any issues that arise during construction activities. Elevate Energy receives no money from the contractor. They also follow through with utility companies to ensure customers get credit for utility rebates. Many of these can be problematic issues when dealing with other contractors.

Our energy assessment was free. We invited friends to hear and learn about the assessment process as an "Energy Party," which is a great way to spread the word about this valuable process. Any single-family homeowner can host an Energy Party. A private assessment costs \$99.

The total cost of air sealing and adding another 6" attic insulation to our house tallied in at \$2825, but a rebate of \$975 was identified. So the final cost of our upgrades was \$1850. Work was scheduled within 2 weeks of signing the contract. The construction company first repeated the blower door test to record a "before" air leakage measurement — our leakage measured at 5027 cubic feet per minute (CFM). After completed improvements, the "after" air leakage was 2917 CFM, or 42% less escaped air.

In addition to getting significant energy saving from this program, we will also be receiving an "Illinois Home Performance with Energy Star" Certification. This certification shows that the improvements have increased the home energy efficiency by at least 15%. The average energy saving are usually \$400-\$600 a year, plus an increase in the value of your home. Another resident achieved a 50% reduction in home energy use last year.

For further information email me or visit these websites:

<http://energyimpactillinois.org/news/>

<http://elevateenergy.org>

<http://gogreennorthbrook.org/initiatives/energy-parties>

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