

Residential Energy Disclosure: Time of Sale

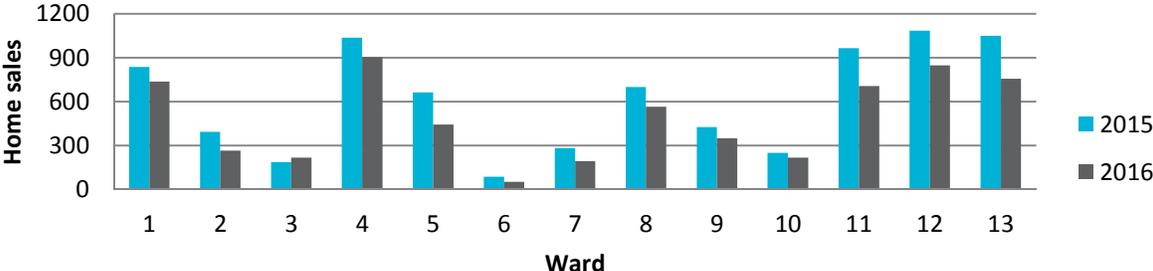
What it is:

Thousands of homes are sold every year in Minneapolis, and each one is required to have a Truth in Sale of Housing (TISH) inspection and report. This inspection provides valuable information to potential buyers regarding the physical condition and necessary repairs of the home. A new energy disclosure component of TISH would further enhance property buyers understanding of the condition of the home and help them plan for potential energy improvements.

Background:

Over 90% of the Minneapolis’ housing stock was built before there was a residential energy code requiring insulation in homes (among other energy requirements), and as a result, many property owners pay higher energy bills compared to their counterparts in newer buildings. In addition, the City’s climate goals necessitate improving the efficiency of residential buildings. To help residents save energy and money in the long term, it makes sense to provide property owners energy information when they are more receptive to making energy investments – that is at the time of sale.

Count of Home Sales by Ward¹



In 2017, the City conducted a pilot to test the feasibility of adding energy disclosure to the TISH process. This pilot showed that TISH inspectors are already collecting energy data, and with a little training could collect a few additional data points needed to generate an energy report. By disclosing energy information as part of TISH, and knowing that there are roughly 7,000 home sales in Minneapolis per year, there is a large opportunity to properly inform this market and improve the Minneapolis housing stock. The table below outlines the savings opportunity for completing insulation upgrades in the Minneapolis homes that need it, as well as the CO2 emissions reduction.

Minneapolis Single Family Homes – Potential First Year Savings²

Year Built	Number of Homes	Energy Saved (Therms)	Dollars Saved	CO2e Reduction (tons)
<1940	52,010	7,356,971	\$5,885,576	38,992
1940-1959	17,106	2,060,161	\$1,648,129	10,919
1960-1979	2,873	292,786	\$234,229	1,552
>1980	4,372	78,717	\$62,974	417
Total	76,361	9,788,634	\$7,830,907	51,880

How to Incorporate Energy Disclosure into Truth in Sale of Housing Process:

1. **Incorporate the necessary data collection to generate an energy disclosure report during TISH inspections.** TISH inspectors are already collecting data related to energy, as shown in the table below, and only a few additional data points are needed to generate a valuable energy report. This will fit well within the current TISH process established by the City.

Current and Additional Data Points for TISH Collection

Category	Currently required in TISH	Additional info needed for energy disclosure
Attic Insulation	- Insulation Type - Inches	- Attic Type: Unfloored, slant, peak, kneewall. etc.
Heating System	- Heating system Type - Evaluate venting size	- Venting type (natural draft, sealed, etc.) - Age: over/under 20 years old
Windows	- Evaluate for screen and/or operating storm	- Determine if single-pane windows w/out storm are present (yes/no)
Walls	- Evaluate structural condition	- Drill hole to determine wall insulation level if built prior to 1980; Record insulation type and number of inches.
Air-tightness/ Indoor air quality	- Some combustion safety testing	- Blower door test - Check for ventilation – HRV, ERV, continuous bath fan

2. **Generate a separate report for energy disclosure that includes recommendations for next steps.** The goal of this report is to disclose information about the key energy assets and recommend how to improve them. It should include information on next steps, estimated cost and savings, and who to contact with questions. In order for this report to be impactful it needs to be separate from the TISH report, so the information is more visible to potential homebuyers. Creating awareness around these assets and how to improve them will help spur the necessary energy retrofits that the City needs to reach the goals outlined in the Climate Action Plan.
3. **Develop and communicate cost effective recommendations with a clear call to action.** For this report and process to be effective it will need to focus on the areas that use the most energy and are a cost effective energy upgrade for the homeowner. It is counterproductive to outline high cost work with little payback, so this report needs to focus on upgrades that have simple pay back of 10 years or less. The table below outlines measures that achieve this payback criteria and a simple decision tree for making recommendations. This criteria also aligns with utility rebate offerings, so they can be leveraged for these improvements.

Example Recommendation Decision Tree

Energy Asset	Recommendation Criteria	Recommendation
Attic Insulation	Less than R-30 (~10 inches of insulation)	Air-seal and insulate your attic to R-49
Heating System	20 years or older AND < 90% efficient	Replace heating system with a 95% Annual Fuel Utilization Efficiency (AFUE)
Windows	Single pane window without storm	Add storms to single-pane windows
Wall Insulation	Less than 1.5" of insulation	Dense-pack exterior walls with insulation

4. **Provide an energy advisor service for homeowners interested in completing recommendations.** The recommended projects are often something that a homeowner has never completed. It will be important to provide them with the necessary support to complete the project. An energy advisor service could talk them through the recommendations, answer any questions, and either connect them with a qualified contractor or an energy audit service that could complete a more detailed review of the homes' energy assets. They can also discuss available rebates and financing if the homeowner is interested.

¹ Source: Minneapolis Open Data

² Housing totals are from Minneapolis parcel data. Savings numbers only include gas savings from upgrading attic or wall insulation on properties that likely need it. HES attic and wall recommendations compiled by DER were used to determine the number of homes that needed attic or wall insulation. Dollar savings uses a cost of \$0.80 per therm, and CO₂ estimates are based on an EPA value of .0053 metric tons/ therm.